

**THE SEMANTICS AND PRAGMATICS OF THE SUBJUNCTIVE IN MODERN
GREEK: A RELEVANCE-THEORETIC APPROACH**

VASSILIKI ROUCHOTA

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For my parents

ABSTRACT

The aim of this thesis is to propose a semantic analysis of the subjunctive mood in Modern Greek and to show how the various interpretations subjunctive clauses may have can be accounted for in terms of independently motivated communicative principles. My analysis is based on relevance-theoretic assumptions about semantics and pragmatics (Sperber and Wilson 1986, Wilson and Sperber 1988a, 1993).

In chapter 1 some of the existing accounts of the subjunctive are considered and found inadequate. A new semantic account, based on the relevance-theoretic approach to semantics, is put forward and discussed, with special reference to the subjunctive in Modern Greek. It is argued that the subjunctive encodes procedural meaning about propositional attitude, which is non-truth-conditional. In particular, it constrains the interpretation of an utterance by indicating that the proposition expressed is entertained as a description of a state of affairs in a possible world.

In chapters 2 and 3 the issue addressed is how we can account for the various interpretations of subjunctive clauses. Imperative-like subjunctive clauses, and subjunctive clauses expressing wishes, potentiality and possibility are discussed in chapter 2; expressive, narrative and interrogative subjunctive clauses are dealt with in chapter 3. It is shown that the way subjunctive clauses are interpreted in a particular context is a function of their semantically encoded meaning and considerations of optimal relevance.

Chapter 4 prepares the ground for chapter 5. It is argued that definite and indefinite descriptions are not semantically ambiguous; their various interpretations are accounted for by a univocal semantics interacting with context and relevance considerations, i.e. pragmatically. In chapter 5 the interpretation of Modern Greek restrictive relatives in the indicative and subjunctive is discussed. It is shown that the restrictions on the possible interpretations of the description which the relative clause accompanies fall out from the semantic contrast between the indicative and the subjunctive as defined in chapter 1.

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INTRODUCTION

In Modern Greek the subjunctive does not take the form of a distinct verbal ending but is realised by the particle *na*, which may occur both in independent and in subordinate clauses^{1,2}:

- (1) *na spoudasis*
 na study-2s-PF
 You should study

- (2) *Thelo na spoudaso*
 want-1s na study-1s-PF
 I want to study

The verb following the subjunctive particle is inflected for person, number, aspect, tense and voice, as in the indicative:

¹The source of Modern Greek *na* is the Classical Greek conjunction *hina*, which was typically used as a conjunction introducing purpose clauses and was followed by a verb in the subjunctive (in Classical Greek the subjunctive was manifested by specific verb endings). There is an issue as to whether Modern Greek *na* is a complementizer or part of the projection of the verb. For syntactic analyses of the subjunctive in Modern Greek see Philippaki-Warburton (1987, 1992), Tsimpli (1990), Agouraki (1991), Roussou (forthcoming). The first systematic approach to the syntax and semantics of the subjunctive was proposed in Veloudis and Philippaki-Warburton (1983). The main points of that paper are repeated in Philippaki-Warburton (1992). Whatever the syntactic status of *na*, there is agreement between these authors that it is the marker of subjunctive mood. A different view is put forward by Lightfoot (1975, 1979), who takes the *na+verb* complex to be a kind of future. This approach will be discussed in chapter 1.

²According to Veloudis and Philippaki-Warburton (1983), there is in Modern Greek a second subjunctive particle, *as*. *As* may occur in independent clauses only. *As*-clauses may be used to issue permission, make suggestions, or express wishes; they may also serve as the antecedents of certain types of conditional sentences (Nikiforidou 1990). *As*-clauses will not be discussed in this thesis.

SUBJUNCTIVE

Na spoudazis/spoudasis/spoudazes/spoudases/ehis spoudasi/ihes spoudasi
na study-2s-IPF/study-2s-PF/studied-2s-IPF/studied-2s-PF/have-2s
studied/had-2s studied

INDICATIVE

spoudazis/tha spoudazis/tha spoudasis /spoudazes/spoudases/ehis
spoudasi/ihes spoudasi
study-2s-IPF/will study-2s-IPF/will study-2s-PF/studied-2s-IPF/studied-2s-
PF/have-2s studied/had-2s studied

Note that the non-past verb forms in the subjunctive are marked for aspect (imperfective, IPF, and perfective, PF), but there are no distinct present and future forms as in the indicative. The future particle *tha* is incompatible with the subjunctive (*na tha spoudasi). By contrast, the indicative distinguishes between perfective and imperfective aspect only in the future, among the non-past forms. As we will see, independent clauses in the subjunctive may be in any tense; however, there are restrictions on the possible tense marking of complement *na*-clauses.

In addition to the preverbal particle *na*, the subjunctive and the indicative are distinguished on the basis of the negative morphemes they allow. Subjunctive clauses may be negated with *min* only, whereas indicative clauses are negated exclusively by *dhen*:

SUBJUNCTIVE

na min spoudazis/spoudasis/spoudazes/etc.
na not study-2s-IPF/study-2s-PF/studies-2s-IPF/etc

INDICATIVE

dhen spoudazis/tha spoudazis/tha spoudasis/etc.
not study-2s-IPF/ will study-2s-IPF/ will study-2s-PF

Subjunctive complements in Modern Greek are similar to subjunctive complements in Albanian and Romanian in that they do not require disjoint reference. In some languages, such as French or Italian, subjunctive complements may be used only if the subject of the main clause and the subject of the complement clause are different; otherwise the infinitive is used (eg. *Je veux qu'il vienne*; *Je veux venir*). This is known as the disjoint reference requirement. In Modern Greek the disjoint reference requirement does not hold, as we can see from (2). Moreover, there is no distinct infinitival form.

In addition to the indicative and the subjunctive, there is in Modern Greek a morphologically distinct imperative verb form. This occurs only in the second person, singular and plural, and is inflected for aspect but not for tense. For example,

- (3) a. *spoudaze/spoudase*
 study-2s-IPF/study-2s-PF
 Study (singular)
- b. *spoudazete/spoudaste*
 study-2pl-IPF/study-2pl-PF
 Study (plural)

This thesis is a study of the semantics and pragmatics of the subjunctive mood, the *na*-clauses, in Modern Greek. My main concern is to propose an account of the meaning encoded by the preverbal particle *na*, and to show that, given this semantics, the various interpretations subjunctive clauses may have in different contexts can be accounted for in terms of general communicative principles. My analysis is based on relevance-theoretic assumptions about semantics and pragmatics (Sperber and Wilson 1986, Wilson and Sperber 1993).

Sperber and Wilson (1986, 1988a) have proposed that mood indicators, such as declarative or interrogative word order and imperative syntax, encode procedural meaning about propositional attitude. This means that the meaning encoded by mood indicators does not directly contribute to explicitly communicated conceptual representations involving propositional attitude descriptions (what they call higher level explicatures), but rather indicates to the hearer what type of

propositional attitude representation he is expected to construct. This thesis is an attempt to extend this analysis to the subjunctive. I will argue in chapter 1 that the preverbal particle *na* in Modern Greek encodes procedural meaning about propositional attitude. In particular, I am going to argue that the subjunctive encodes the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. I will show that this account is more adequate than earlier analyses of the subjunctive in general and the subjunctive in Modern Greek in particular. In addition, it provides a satisfactory basis for the semantic distinction between clauses in the subjunctive, *na*-clauses, and clauses in the indicative, non *na*-clauses.

Independent *na*-clauses may be interpreted in a variety of ways, depending on the context of utterance. For example, they may be understood as issuing orders or requests, permission or advice, making suggestions or pleas, expressing wishes or uncertainty, or strong emotions, like surprise and disapproval, in the course of narration, or asking questions. In chapters 2 and 3 I will provide a detailed account, based on relevance theory, of the ways in which independent subjunctive clauses in Modern Greek may be interpreted. I will argue that the various interpretations such clauses may have in different contexts are a function of their linguistically encoded content and pragmatic considerations, i.e. considerations hinging on the principle of relevance (Sperber and Wilson 1986). In particular, I will show that the relevance-theoretic concept of enrichment plays a crucial role in the interpretation of *na*-clauses. Moreover, I will discuss both declarative and interrogative *na*-clauses and I will show how the procedural meaning encoded by declaratives and interrogatives interacts with the procedural meaning of the subjunctive. I will also consider the differences between *na*-clauses and imperatives. Finally, I will show that the differences in meaning between *na*-clauses and non *na*-clauses follow from the proposed semantic contrast between the subjunctive and the indicative.

In the remaining chapters of the thesis, I will consider the interpretation of restrictive relatives in the subjunctive and indicative. I will start by arguing in chapter 4 that definite and indefinite descriptions are not semantically ambiguous. I will take the view that the meaning of definite and indefinite descriptions should be analyzed in procedural rather than conceptual terms. I will discuss the attributive, the referential and the specific interpretations of definite and indefinite

descriptions, and I will argue that such interpretations depend on the context and considerations of optimal relevance. The pragmatically motivated process of enrichment will be shown to be crucially involved here as well.

Given this account of the semantics and pragmatics of definite and indefinite descriptions, I will argue in chapter 5 that the restrictions on the possible interpretations of descriptions followed by relatives in the subjunctive are not due to the semantic content of the descriptions themselves, but to the semantic contrast between *na*- and non *na*-clauses as defined in chapter 1. The restrictions in question are related to the following three distinctions: the referential-attributive distinction, the possibility of applying the rule of existential generalisation, and the transparent-opaque distinction. Definite and indefinite descriptions followed by indicative relatives may be interpreted referentially or attributively, existentially or non-existentially, transparently or opaquely. On the other hand, there is a correlation between the use of a *na*-relative and the attributive interpretation of the modified description, the interpretation on which existential generalisation does not apply, and, to a limited extent, the opaque interpretation. I will argue that the source of this correlation is not the "ambiguity" of definite and indefinite descriptions, but the semantic contrast between the indicative and the subjunctive.

CHAPTER 1

THE SEMANTICS OF *NA*-CLAUSES

1.1. Introduction

In this chapter I will start by considering a few semantic analyses of the subjunctive mood. I will look at the existing analyses of the subjunctive and I will argue that they are placed within unsatisfactory theoretical frameworks (or in no framework) and that they are empirically inadequate to account for the MG data. I will then consider three different semantic analyses of *na*-clauses. One of them will be shown to be promising although lacking in theoretical backing. In the rest of the chapter I present the relevance-theoretic approach to semantics and I will propose and defend a new account of the semantics of *na*-clauses (and non *na*-clauses).

1.2. Earlier approaches to the subjunctive

In this section I want to consider three possible approaches to the subjunctive. I will first look at the performative hypothesis, which was the first systematic attempt to account for mood in independent clauses. (By "mood" here I mean both sentence types and inflectional mood). The performative analysis of the subjunctive as proposed in Lakoff (1968) and Lightfoot (1975) is considered in more detail. I will then discuss an account of the subjunctive in Spanish proposed by Hooper (1975) which is based on the semantic notions of assertion and nonassertion. Finally, I will turn to the speech act semantic account of sentence types which is the theory which replaced the performative hypothesis.

1.2.1. The performative analysis

A well known approach to mood was the so-called performative hypothesis. The idea behind this theory was that in addition to *explicit* performatives like those in (1),

- (1) a. I promise to be back by twelve
- b. I congratulate you on your promotion
- c. I name this ship "The Queen Victoria"

discussed for the first time by Austin (1962), there are also *implicit* performatives. In fact, every sentence has as its highest clause in the underlying syntactic structure a performative clause. A performative clause is first person singular, its indirect object is second person, and it is conjugated only in the present tense. In standard versions of the performative hypothesis there is only one such clause per sentence. On this view, the second member of each of the following pairs is derived transformationally from the first by deleting the performative verb:

- (2) a. I say that John is a fool
- b. John is a fool
- (3) a. I ask whether dinner is ready
- b. Is dinner ready?
- (4) a. I request you to put Smith's file on my desk
- b. Put Smith's file on my desk
- (5) a. I promise that I will be back by midnight
- b. I will be back by midnight
- (6) a. I predict that he will be home soon
- b. He will be home soon

This approach suggests that illocutionary force is semantic in the truth conditional sense and fully specified by the meaning of the performative clause. So for example, (4a) and (4b) are semantically equivalent, i.e. they have the same truth conditions.

When the performative hypothesis was first introduced it was believed that it was independently motivated on syntactic and semantic grounds (Ross 1970, Sadock 1974). However, it has since been convincingly argued that it creates more problems than it can solve and is to be rejected on both semantic and syntactic grounds (for an overview of the arguments and a critical discussion see Palmer 1986:167-171, and especially Levinson 1983: 226-284 and Gazdar 1979: 15-36). I will here briefly mention some of these considerations, with the aim of showing later that the relevance theoretic approach to mood does not face these problems.

There are two basic problems with the performative hypothesis. The first one is that it predicts that declaratives, imperatives and interrogatives are multiply ambiguous. The second one is that it predicts the wrong truth conditions for declarative sentences. Let me start with the second point.

According to this analysis, (7) and (8) below are truth conditionally equivalent. However, it is intuitively clear, as Lewis (1972) pointed out, that a sentence like (7) is necessarily false whereas (8) may be true:

(7) The moon is made of cheese

(8) I say that the moon is made of cheese

If, now, we drop the performative hypothesis for declarative sentences, as Lewis (1972) did, then it no longer offers a symmetrical semantic account of all sentences. Moreover, some of the syntactic arguments which motivated the performative hypothesis in the first place relate to declarative sentences. For example, the presence of the reflexive pronoun "myself" in (9) can be explained, it was argued, if we assume that at deep structure there is a higher performative clause like "I say":

(9) These regulations were approved by the parents' committee and myself

Moreover, if declaratives and non-declaratives have the truth-value of the corresponding sentences with the performative verb, then they are predicted to be as many ways ambiguous as there are distinct illocutionary uses of them. For example, an imperative like (10):

(10) Eat up your food

may be paraphrased with any one of the non-synonymous sentences in the following (incomplete) list:

- (11)**
- a. I request that you eat up your food**
 - b. I demand that you eat up your food**
 - c. I order you to eat up your food**
 - d. I exhort you to eat up your food**
 - e. I permit you to eat up your food**
 - f. I advise you to eat up your food, etc**

In the same way a declarative like (12):

(12) The president has resigned

may be paraphrased with each of the following sentences:

- (13)**
- a. I say that the president has resigned**
 - b. I state that the president has resigned**
 - c. I declare that the president has resigned**
 - d. I suppose that the president has resigned**
 - e. I guess that the President has resigned, etc**

And an interrogative like (14):

(14) Will you buy me a chocolate?

will be ambiguous between at least the following:

- (15)**
- a. I ask you whether you will buy me a chocolate**
 - b. I wonder whether you will buy me a chocolate**
 - c. I request that you tell me whether you will buy me a chocolate, etc**

This multiple ambiguity of all the sentence types is counterintuitive and makes one rather suspicious of this account. An analysis on which we assign a simple univocal semantics to each of these sentence types and deal with the various illocutionary forces in terms of general communicative principles is preferable if possible. Such an account placed within the framework of relevance theory has been proposed by Wilson and Sperber (1988a) and will be presented in section 1.4.

Let me now turn to performative analyses of the subjunctive mood. As far as I know performative analyses have been proposed for the subjunctive in Latin (Lakoff 1968), in Classical Greek (Lightfoot 1975), in Italian (Calboli 1971) and in Spanish (Rivero 1971). I will discuss here Lakoff's and Lightfoot's accounts.

Lakoff (1968) proposes to account for independent subjunctives in Latin by postulating a number of higher abstract verbs. Her proposal is motivated by the following observations. First, independent subjunctives have various meanings. For example, the independent subjunctive in (16) is three ways ambiguous as indicated in (17):

(16) Venias

- (17) a. imperative: "Come", "You should come"
 b. wish: "May you come!", "If only you were to come"
 c. possibility: "You may come", "Perhaps you are coming"

(Lakoff 1968:158)

Second, when an independent subjunctive is questioned (forming either a yes-no interrogative or a wh-interrogative) it can only have the "possibility" meaning. So, *Veniasne?* may mean "Is it possible that you are coming?" but the two other meanings are not available (not even conceivable as Lakoff points out); and *Quis veniat?* may mean "Who may come?" or "Who would come?" but not "Who do I wish would come?" or "Whom do I order to come?". Third, there are two ways of negating an independent subjunctive: either with *ne* or with *non*. When (16) is negated with *ne* it is still ambiguous between the "imperative" and the "wish" meaning whereas when negated with *non* it can only have the "possibility" meaning. Now, in embedded subjunctive clauses the occurrence of *non* or *ne* is determined by certain syntactic properties of the main verb. This rule could be

generalised to account for the negated independent subjunctives as well if we assume that they are embedded under a higher verb, the syntactic properties of which are responsible for the selection of the negation morpheme.

Lakoff argues that we can explain the ambiguity of independent subjunctive clauses, the restrictions on the interpretation of interrogative subjunctive clauses and the facts relating to negation, if we assume that these subjunctives are embedded under abstract higher verbs in deep structure:

"The meaning-class of this verb will give the meaning of the subjunctive, govern whether it is negated by *ne* or *non*, and account for whether or not it can be questioned;..." (Lakoff 1968:160).

These abstract verbs are absent at the surface structure because of the operation of a late deletion rule. Lakoff proposes the following abstract verbs for independent subjunctive clauses:

The imperative abstract verbs: [imper], [hort]

The optative abstract verb: [vel]

The jussive abstract verb: [oport]

The concessive abstract verb: [lic]

The deliberative abstract verb: [aequum]

The potential abstract verb: [poss]

The abstract verb of the purpose clause: [vol]

The abstract verb of the relative purpose clause: [designate]

The first thing to notice about Lakoff's account is that it is essentially syntactic. Subjunctive desinences or complementizers do not have inherent meaning. They occur as a result of a transformation which takes as input a [+IND] clause and yields as output a [-IND] clause. The basic mood is the indicative from which the subjunctive is derived transformationally. According to Kempchinsky (1986: 32), this analysis recognises in some way that subjunctive complements must be subcategorised for by the matrix verb but

"the mechanisms by which this subjunctive complement is introduced are ad hoc in nature (there are no restrictions, for example, on where the relevant feature for subjunctive may be inserted) and only possible in a framework such as that of Aspects with few restrictions on the form of grammar".

As Kempchinsky (1986:33) points out, a morphological feature changing rule which is relevant to subcategorisation like the one proposed by Lakoff would violate Chomsky's (1986) view that only morphological material which does not affect theta-marking and, crucially here, which does not enter into s-selection can be introduced after deep structure (e.g. agreement marking on the verb).

Moreover, there seems to be a contradiction in Lakoff's account, as on the one hand, her analysis seems to assume that subjunctive clauses are multiply ambiguous (since they may be governed in deep structure by any of the verbs cited above, subject to certain syntactic restrictions) and, on the other hand, she claims that the subjunctive verb form has no meaning:

"the markers of mood - subjunctive in Latin, subjunctive and optative in Greek - are all complementizers and, as such, are always devoid of meaning of their own ..." (Lakoff 1968:161)

This leads to another question: assuming Lakoff's theory is correct, how are subjunctive clauses interpreted? On what evidence does the hearer recover the higher verb (he presumably has to recover it, otherwise he doesn't understand the illocutionary force of the utterance) if the subjunctive mood markers do not encode any meaning? The approach I am going to propose is essentially different. I will argue that mood markers, in particular *na*, have semantic content and thus contribute to the interpretation of the utterances in which they occur.

I will now turn to Lightfoot's analysis. Lightfoot (1975) puts forward a performative analysis for the subjunctive in Classical Greek. He shares, at least at the beginning of the book, Lakoff's basic idea that the subjunctive does not carry any meaning of its own:

"The point of this chapter has been to enumerate and describe the complement constructions of Greek and to show that despite their formal diversity none of them carry any distinctive meaning of their own." (Lightfoot 1975:48)

However, Lightfoot criticises Lakoff's work, arguing that the set of higher verbs she proposes seems to be of "a largely random composition" and "no attempt was made to identify a meaning class of subjunctive governing verbs" (Lightfoot 1975:21). He identifies such a class: all verbs which take subjunctive complements share the property of "future directedness". He claims that

"the subjunctive can be viewed as an alternative form of the future tense whose occurrence is governed by the character of the main verb. That is to say, certain main verbs will allow a future tense underneath them to be realised with subjunctive endings" (Lightfoot 1975:48).

What, then, is the difference between the indicative future and the subjunctive?

"When referring to the future..., if a sentence has no existential presupposition the subjunctive/optative will occur; and if there is an existential presupposition, the indicative will be used" (Lightfoot 1975:133).

It is clear that by the end of the book there is a shift in Lightfoot's position: he gives up the idea that the subjunctive carries no meaning of its own.

In later work Lightfoot (1979: 286, fn1) rejects an analysis of the subjunctive in terms of abstract verbs; he then assumes that subjunctives will be generated freely in the syntax and will be interpreted by semantic rules as indicating future time and absence of an existential presupposition. This semantic account is further considered in section 1.3.1.

No performative analysis of *na*-clauses in Modern Greek has ever been put forward. It should by now be clear that the performative hypothesis does not provide an adequate framework for the study of mood in general, so I will not consider such an account for *na*-clauses. Towards the end of this chapter I will show that the relevance-theoretic account of mood, which bears some superficial

similarity to the performative account, does not face any of the problems discussed here.

1.2.2. Assertion vs nonassertion

Terrell and Hooper (1974), Hooper (1975), Klein (1975) and others argue that the semantic notions of assertion and nonassertion have syntactic consequences in the complement system of Spanish. In particular assertive predicates require indicative complements, whereas nonassertive predicates require subjunctive complements.

What do the terms assertion and nonassertion mean? Hooper (1975) tries to sharpen up these concepts by proposing the following test for identifying the type of predicate: only assertive predicates allow their complements to be preposed. For example, the predicates in (18) are assertive, whereas those in (19) are nonassertive (adapted from Hooper 1975: 94-95):

- (18) a. I think the shops are open
b. The shops are open, I think
- c. He says we need a new PC
d. We need a new PC, he says
- (19) a. It's likely that she will apply
b. *She will apply, it's likely
- c. Probably, all flights are booked
d. ?All flights are booked, probably

Which semantic concept corresponds to the syntactic property of preposing?
Hooper (1975:95) says:

*The assertive predicates form a natural semantic class. They are all affirmative in nature; they imply in one manner or the other that the speaker

or subject of the sentence has an affirmative opinion regarding the truth value of the complement proposition....a negative opinion makes the predicate nonassertive..."

She distinguishes strong assertives, such as *acknowledge, assert, explain*, etc, and weak assertives such as *think, believe, seem*; nonassertive predicates may be non factive, such as *be likely, be conceivable, doubt* and the strong assertives when negated, or factive such as *regret, resent, be interesting, surprise*, etc.

According to Hooper, in Spanish nonassertive predicates require subjunctive complements, whereas assertive ones take indicative complements. This generalisation, however, seems to be far from exceptionless and the concepts of assertion and nonassertion, already quite vague, have often been stretched in order to account for the Spanish data (for a critical discussion see Palmer 1986: 140-146).

With regard to *na*- and non *na*-clauses in MG it is easy to show that Hooper's theory does not fare very well. To start with, predicates taking *na*-clauses allow them to be preposed (although not so easily when embedded under "it is likely/probable, etc):

- (20) a. *thelo na figo*
want-1s na-leave-1s-PF
I want to go
- b. *na figo, thelo*
na-leave-1s-PF want-1s
To go, I want¹
- c. *Lei/Protini/se simvoulevi na figis*
Say-3s/suggest-3s/you advise-3s na leave-2s-PF
He says/suggests/advises you to go

¹Hooper (1975) does not discuss volitional verbs which, as Klein (1977) shows, are nonassertive predicates.

d. na figis, lei/protini/se simvoulevi
na leave-2s-Pf, say-3s/suggest-3s/you advise-3s
That you should go, he says/is suggesting/advises you

Moreover, the classes of assertive and nonassertive verbs do not seem to be identical in MG and Spanish. In MG predicates which are on Hooper's analysis assertive may take *na*-complements as in (20c,d). More crucially, predicates which are supposed to be nonassertive like *amfivallo* "doubt", *metaniono* "regret", *ekplisome* "to be surprised" allow only non *na*-complements, contrary to the predictions of Hooper's analysis.

In addition, there doesn't seem to be a clear link between independent indicative clauses and assertion, on the one hand, and between independent subjunctive clauses and nonassertion on the other. What do the terms assertion and nonassertion mean when it comes to independent clauses? Hooper (1975:97) says:

"To this point I have been using the term ASSERTION to mean a declarative proposition or a claim to truth that, on at least one reading, may be taken as the semantically dominant proposition in the discourse context"

However, if indicative clauses are assertions, i.e. claims to truth, then how are we to explain their occurrence in interrogatives and the antecedent of conditionals as in (21) and (22):

(21) a. Pou pige o Kostas?
Where went-3s the Kostas?
Where did Kostas go?

b. Efage i Maria?
Ate-3s the Mary?
Did Mary eat?

c. ¿Viene mañana? (indicative)
Is he coming tomorrow? (Hooper 1975:122)

- (22) An o Kostas den ine sto spiti tou, ine stis Marias
If the Kostas not is at house his, is-3s at Mary's
If Kostas is not at his place, then he is at Mary's

On the other hand, the assumed link between subjunctive clauses and nonassertion breaks down in view of the fact that independent subjunctive clauses may be used to make assertions both in MG and in Spanish, albeit only weak ones. According to Hooper (1975), there is a very clear difference in meaning between (23a) and (23b):

- (23) a. Tal vez venga (SUBJ) mañana
Perhaps he'll come tomorrow
- b. Tal vez vendrá (IND) mañana
Perhaps he'll come tomorrow (Hooper 1975:123)

In the indicative version "the speaker actually commits himself to the truth of the proposition and asserts it", whereas the subjunctive version "implies so much doubt that it cannot be considered an assertion" (Hooper 1975:123). In MG there is a comparable difference in meaning between (24a) and (24b): (24a) sounds more doubtful than (24b).

- (24) a. Isos na erthi avrio
Perhaps na come-3s-PF tomorrow
Perhaps he might come tomorrow
- b. Isos tha erthi avrio
Perhaps will come-3s-PF tomorrow
Perhaps he will come tomorrow

However, both (23a&b) and (24a&b) may be uttered assertively. Both members of each pair are weak assertions; the only difference is that the subjunctive versions are weaker than the indicative ones. Subjunctive clauses are clearly not excluded from making assertions.

An additional problem for the correlation of independent indicative clauses with assertion and independent subjunctive clauses with nonassertion is that on this view the imperative mood is lumped together with the subjunctive as semantically identical (Terrell and Hooper 1974:487). However, there are clear differences in meaning, at least in MG, between the imperative verb form and the *na*-clause used instead of the imperative, which on this analysis would be left unaccounted for. *Na*-clauses when used as imperatives are perceived to be more polite and more indirect than the corresponding imperative forms. This issue will be discussed in detail in chapter 2.

In conclusion, the notions of assertion and nonassertion do not provide a theoretically or empirically adequate framework for the study of the subjunctive.

1.2.3. A speech act semantic account

As far as I know, no complete account of the indicative and the subjunctive mood has been proposed within the speech act framework. The main concern of speech act theorists has been to account for the semantic differences between declaratives, imperatives and interrogatives. According to the standard speech act account (Searle 1969, 1979b), sentences encode two types of meaning: truth conditional information and information about illocutionary force. On this view, cognate declaratives, imperatives and interrogatives like those in (25):

- (25) a. John writes letters
 b. Does John write letters?
 c. John, write letters

express the same proposition, which is usually taken to be given by the declarative. So, (25a-c) do not differ with respect to what they describe, i.e. their truth conditional meaning. They differ with respect to what they indicate, i.e. their illocutionary force. Declaratives are used to make assertive speech acts, i.e. they indicate that the speaker is committed ^{with} varying degrees of strength to the proposition expressed. Imperatives perform directive speech acts, i.e. attempts by the speaker to get the hearer to do something. Interrogatives are a particular kind

of directives: attempts by the speaker to get the hearer to provide some information.

A brief proposal concerning sentences in the subjunctive is to be found in Vanderveken (1990: 15, 93). He puts forward the claim that subjunctive sentences are a particular type of exclamatory sentences. Exclamatory sentences perform expressive speech acts. In particular, they "are used to express the speaker's mental states", as in (26):

(26) How glad I am that he won! (Vanderveken 1990:15)

Subjunctive sentences, such as (27), are, according to Vanderveken, used to express a particular type of mental state, namely the speaker's will:

(27) Let there be rain! (Vanderveken 1990:15)

However, not all independent subjunctive clauses are used to express the speaker's will in MG. Consider, for example:

- (28) a. Na klidosis tin eksoporta
na lock-2s-PF the front door
You should lock the front door
- b. Makari na ihe girisi noritera
wish-particle na had returned-3s earlier
Would that he had returned earlier
- c. Isos na ine arrostos
perhaps na is ill
Perhaps he may be ill

The *na*-clause in (28a) is used to express the speaker's will; however, in (28b) the speaker expresses an unrealisable wish, and in (28c) the speaker expresses her low confidence in the truth of the proposition expressed.

Moreover, complement clauses in the subjunctive are not used to express the speaker's will:

- (29) a. Varethika na se perimeno
bored-1s na you wait-1s-IPF
I am bored of waiting for you
- b. Arhisa na katharizo
began-1s na clean-1s-IPF
I began to clean up
- c. I Maria arnite na paradehti to lathos tis
the Mary refuses-3s na admit the mistake hers
Mary refuses to admit her mistake
- d. Thelo na telioso tis spoudes mou
want-1s na finish-1s-PF the studies mine
I want to finish my studies

In none of these examples does the complement in the subjunctive express the speaker's will; even in (29d) it is the main verb rather than the complement which expresses the speaker's will.

Also, in adverbial clauses the subjunctive is not used to express the speaker's will:

- (30) a. na bi ksafnika o Kostas, tha lipothimisi i Maria
na enter-3s-PF suddenly the Kostas, will faint-3s the Mary
If suddenly Kostas comes in, Mary will faint
- b. Prin na ksimerosi pigan kinigi
before na dawn-3s-PF went-3pl hunt
Before it was dawn they went hunting

Can we give a different semantic account of the subjunctive mood in the speech act framework? It might seem initially, on the basis of examples like those in (31) and (32), that we could claim that subjunctive clauses are directives, i.e. attempts by the speaker to get the hearer to do something:

(31) Venga aquí (subjunctive)
Come here (Hooper 1975:122)

(32) Na erthis edo
na come-2s-PF here
Come here

Note, however, that, since imperatives are usually claimed to be directives, such an account would render independent subjunctive clauses synonymous with imperatives, although, as I mentioned earlier, there are differences in meaning between imperatives and *na*-clauses used instead of imperatives. Even more crucially, such a semantic analysis cannot account for any of the *na*-clauses in (28)-(30) (except for (28a)).

On the other hand, there is no semantic link between indicative or non *na*-clauses and assertion, as I showed in the last section. Another argument in support of this claim comes from embedded non *na*-clauses:

- (33) a. O Kostas den nomizi oti ta magazia ine klista
the Kostas not think-3s that the shops are closed
Kostas does not think that the shops are closed
- b. O Kostas arnithike oti ipe psemeta
the Kostas denied-3s that said-3s lies
Kostas denied that he had lied

None of the embedded non *na*-clauses in (33) could be said to make assertive speech acts.

In conclusion it is quite clear that the indicative and the subjunctive mood cannot be argued to be illocutionary force indicators in the same way that

declaratives, imperatives and interrogatives may be claimed to be. As a matter of fact, it has been convincingly argued by Wilson and Sperber (1988a) that speech act accounts of the semantics of imperatives and interrogatives are unattainable as well.²

1.3. Earlier semantic approaches to *na*-clauses

In this section I will look at three very different semantic accounts of *na*-clauses. Lightfoot (1979) argues that the *na*+verb complex is a type of future tense. Veloudis and Philippaki-Warbuton (1983) and Philippaki-Warbuton and Veloudis (1984) argue that *na*-clauses encode propositional attitude information. Finally, Christidis (1985, 1987) attempts to relate semantically the subjunctive marker *na* to the stressed deictic particle *na*.

1.3.1. A tense analysis

According to Lightfoot (1979), the distinction between the two types of future, characteristic of Classical Greek (see section 1.2.1), has survived in Modern Greek: the indicative future (*tha* + verb, marked for person, number, and aspect) is a future tense with existential presupposition whereas the subjunctive (*na*-clauses) is a future tense with no existential presupposition.

By "existential presupposition" Lightfoot (1975:81) means a presupposition about reality, i.e. a presupposition that a proposition is true. Lightfoot (1975: 133) thinks that "logically,..., it is inherently impossible to treat the future factually". However, as he points out, this is exactly what we do with sentences like:

- (34) a. It will snow tomorrow
b. because it will snow tomorrow, I am taking my coat
c. he knows that it will snow tomorrow (Lightfoot 1975: 133)

²The arguments presented in this section are of the same type as those used by Wilson and Sperber (1988a) and Wilson (1992) to argue against the speech act account of declaratives and non-declaratives.

So, Lightfoot claims that there are two ways in which we can refer to the future: with or without an existential presupposition. This is grammaticalised in Classical Greek and in MG with the choice between the indicative future and the subjunctive. For example, according to Lightfoot (1979:285), when you utter (35a) you make an assumption about reality, whereas there is no such assumption in a volutative expression like (35b) or a deliberative question like (35c):

- (35) a. Tha vreksi avrio
 will rain-3s tomorrow
 It will rain tomorrow (adapted from Lightfoot 1979:285)
- b. Na skotosoun ton Sokrati
 na kill-3p-PF the Socrates
 Let them kill Socrates (adapted from Lightfoot 1979:282)
- c. Ti na kanoume?
 What na do-1p
 What are we to do? (adapted from Lightfoot 1979:282)

Lightfoot bases his analysis on the false claim that the subjunctive occurs as a complement type only to future referring verbs, and that main clause subjunctives are all future referring. He makes this point with respect to Classical Greek but he clearly believes that it carries over to MG as well (1979: 284, 290). However, it is far from true that all independent *na*-clauses are future referring. In fact, *na*-main clauses may bear past tense morphology. Consider:

- (36) a. Isos na efige o Janis
 Perhaps na left-3s the John
 Perhaps John left
- b. Na agorase i Maria frouta sti laiki?
 na bought-3s the Maria fruit at the market
 Could it be the case that Mary bought fruit at the market?

c. Makari na telefonise o Kostas
 wish-particle na phoned-3s the Kostas
 Hopefully Kostas called

In these examples the verb preceded by *na* bears deictic tense specification: all these sentences are clearly couched in the past tense. In view of this, it can hardly be argued that the *na+verb* construction is a kind of future.

Moreover, it is simply not true that all the verbs which allow *na*-complements are future referring. Consider, for example,

(37) a. O Petros thelise na spudasi
 The Peter wanted-3s to study-3s-PF
 Peter wanted to study

b. Akouo/vlepo to Jani na beni
 hear/see-1s the John na enter-IPF-3s
 I hear/see John coming in

c. Akousa/ida to Jani na beni
 Heard/saw-1s the John na enter-3s-IPF
 I heard/saw John coming in

d. I Maria niothi/eniose ton Petro na hani to tharos tou
 The Mary senses/sensed-3s the Peter na lose-3s-PF the courage his
 Mary senses/sensed Peter losing his courage

Only in (37a) is the main verb future referring. The perception verbs "see, hear, sense" in (37b-d) are not future referring. The state of affairs described in the *na*-clause in (37b-d) is understood to be taking place at the same time as the hearing, the seeing and the sensing. Moreover, the occurrence of *na*-clauses as complements of such verbs refutes Lightfoot's claim that a *na*-clause encodes the absence of existential presupposition.

Finally, Veloudis and Philippaki-Warburton (1983), Philippaki-Warburton (1992) put forward a few additional arguments against the analysis of *na*-clauses

as future, which relate to the distribution of the negative morphemes and the historical development of the particles *na* and *tha*. A semantic argument that they present is that, on Lightfoot's analysis, it is not clear how the *na*-clauses would be semantically distinguished from the imperative verb form, as for example in (38),

- (38) Treha/Trekse
Run-ipf/run-PF
Run

which presumably also refers to the future and is characterised by the lack of existential presupposition.

I conclude that the semantic analysis of *na*-clauses as a kind of future tense with no existential presupposition as proposed in Lightfoot (1975, 1979) is not on the right track.³

1.3.2. A propositional attitude analysis

I will now consider a much more promising semantic account of *na*-clauses which was developed in Veloudis and Philippaki-Warburton (1983) and in Philippaki-Warburton and Veloudis (1984).

³It is worth mentioning here that it is often claimed that the future is inherently modal. So, for example, according to Lyons (1977: 677):

"Futurity is never a purely temporal concept; it necessarily includes an element of prediction or some related notion."

I have shown in earlier work (Rouchota 1991a) that the modal uses of *will* in English and the future indicative in MG follow from their semantics ("future") and pragmatic considerations. There is no reason to claim that the future is necessarily modal or does not pertain to the actual world. The position I am taking here is that the future locates a state of affairs in the actual world thought of as historically extended (for a similar view see Huntley 1980, 1984 and Philippaki-Warburton 1992). Since *na*-clauses clearly do not encode future tense, the issue of the future's inherent modality is not very relevant here. However, an explanation should be given for why *na*-clauses are often understood to locate the states of affairs they describe in the future. This will be taken up again in chapter 2.

In a first attempt to describe the semantics of *na*-clauses, Veloudis and Philippaki-Warbuton (1983:159-160) claim that the subjunctive mood in main clauses,

"expresses desire or will, wondering, consent or indifference, exhortation or prohibition, wish or curse, surprise or discontent, disapproval or approval. In other words, the subjunctive denotes, one could say with respect to these sentences, the speaker's attitude towards the propositional content of his utterance."

This distinguishes the subjunctive from the indicative,

"which is the mood of reality, i.e. it expresses a propositional content (and not the speaker's attitude towards it) as real, locating it in time" (my translation).

These observations are more or less borne out by the data. *Na*-clauses do indeed convey attitudes like the ones referred to by Veloudis and Philippaki-Warbuton (hereafter V & Ph-W). Let us consider some examples. Suppose the hearer doesn't want to work as many hours as he is supposed to. In this context the speaker of (39) below

- (39) *na dhoulevis oso thelis*
 na work-2s-IPF as much as want-IPF-2s
 Work as much as you want

may be understood as consenting to the hearer's wish to work less. In a context where, in addition to the hearer's unwillingness to work, the speaker has authority over him, she is, for example, his tutor, she may be understood as issuing him permission to work less. Alternatively, if the speaker utters (39) when asked by the hearer for instructions as to how to go about his life as a student, she may be understood as advising or exhorting him to work as much as he wants and not harder. On the other hand, the non *na* counterpart clause in (40) below:

- (40) *dhoulevis oso thelis*
work-2s-IPF as much as want-IPF-2s
you are working/work as much as you want

cannot be used in any of these contexts to communicate the speaker's consenting to, permitting or advising the hearer to work as much as he wants. The speaker is rather typically understood as simply saying that the hearer works as much as he likes.

A different case is illustrated by the following example. Suppose that Bill's mother just heard that her son had a terrible car accident. In her despair she exclaims:

- (41) *na ine zodano to pedhi mou*
na is-3s-IPF alive the child of mine
May my child be alive

The speaker here communicates her desire that her son is alive. The corresponding non *na*-clause in (42) :

- (42) *ine zodano to pedhi mou*
is-3s-IPF alive the child of mine
My child is alive

cannot be used in the same context to express the speaker's attitude of desire. In fact, (42) typically communicates that the speaker says that her child is alive and would probably be inappropriate in the context given here.

Independent *na*-clauses are also often used to express wishes which cannot but remain unfulfilled. For example, (43)

- (43) *Na ksanageniomouna*
na was born-IPF-1s again
Would that I were born again

may be uttered by a speaker who intends to communicate her obviously impossible wish to be born again. By contrast, uttering the corresponding non *na*-clause in (44) below,

- (44) *ksanageniomouna*
was born-IPF-1s again
I was being born again

the speaker would never be understood as communicating her wish to be born again.

The speaker's surprise, approval or disapproval may also be communicated by a *na*-main clause, as V & Ph-W point out. As a reply to Mary's mentioning that her boyfriend is on holiday and sends her a letter every day, (45) below

- (45) *na sou stelni ena grama tin imera. Ti sinithia!*
na to you send-he a letter the day. What habit!
To send you a letter every day. What a habit!

may express the speaker's disapproval if, for example, it is part of the context that the speaker dislikes frequent expressions of sentimentality. In a different context where, for example, the speaker expected Mary's boyfriend to forget that Mary existed as soon as he went on holiday, (45) could communicate the speaker's surprise. If, on the other hand, the speaker thinks that this is a good sign for the way in which Mary's relationship is developing, then (45) may convey the speaker's approval, and so on and so forth. Now note, that in these contexts the non *na*-corresponding clause in (46):

- (46) *sou stelni ena grama tin imera. Ti sinithia!*
to you send-he a letter the day. What habit!
He sends you a letter every day. What a habit!

may also communicate the speaker's disapproval, surprise or approval. Still there is a difference in meaning between (45) and (46). In (46) the speaker presents the described state of affairs as a reality, to use V & Ph-W's words. The speaker

communicates something like: Mary's boyfriend sends her a letter every day and I have a certain attitude towards this. On the other hand, uttering (45) the speaker communicates her attitude without making any comments with respect to whether the described state of affairs is a reality.

As I pointed out earlier, a *na*-clause may also be used to make an assertion. Suppose we are guessing George's age, and I utter (47):

- (47) To poli ikosi hronon na ine o Giorgos
At most twenty years na is-3s the George
George may be/must be at most twenty years old

(47) differs in meaning from (48) below as the English translations illustrate:

- (48) To poli ikosi hronon ine o Giorgos
At most twenty years is-3s the George
George is at most twenty years old

Both in (47) and in (48) the speaker is understood to be saying that George is at most twenty years old. However, choosing to utter (47) rather than (48) the speaker indicates that she has a lower degree of commitment to the truth of this proposition. I will return to examples like these in chapter 2, where I will also discuss in detail the interpretation of non *na*- and *na*-clauses like those in (39)-(44). Finally, examples like (45) and (46) will be dealt with in chapter 3.

Coming back to the claim made by V & Ph-W (1983) and quoted at the beginning of this section, the first point I want to make is that it does not seem to be the case, as V & Ph-W claim, that non *na*-clauses simply locate the described state of affairs in time without expressing a particular attitude towards it. As I suggested above, a speaker uttering a non *na*-clause may communicate at least certain attitudes like, for example, that she is surprised at/ approves/disapproves/believes, etc. the proposition expressed. It does, however, seem to be the case, as V & Ph-W claim, that the state of affairs described in a non *na*-clause is presented as real. Clearly, these intuitions need to be sharpened and I will try to do so shortly.

Second, V & Ph-W use the term 'propositional attitude' in a loose way to refer both to the speaker's attitude towards the proposition expressed (eg. belief, desire) and to certain speech act descriptions (eg. exhortation, prohibition). I will accept their claim that the information encoded in *na* concerns the speaker's attitude towards the proposition expressed, but I am going to use this term in the sense of Fodor (1981) to refer exclusively to mental states.

Third, and most important, the question is whether V & Ph-W's (1984) claim that *na*-main clauses express the speaker's attitude towards the proposition expressed offers an adequate basis for a precise specification of the semantics of *na*-clauses. To answer this, we will first consider the semantic analysis of *na*-complement clauses proposed by Philippaki-Warbuton and Veloudis (1984).

Philippaki-Warbuton and Veloudis (1984) point out that *na*-complement clauses are syntactically different from *oti/pos*-complement clauses. It is shown with syntactic arguments that whereas *oti* and *pos* are complementizers introducing the complement clause that contains them, *na* is not a complementizer. It is argued instead that *na*-clauses are introduced by a zero complementizer.⁴ Ph-W & V then go on to argue that this syntactic difference between *oti/pos*- and *na*-complements correlates with a semantic distinction. Looking at the examples in (49) and (50) below,

- (49) a. O Janis kseri oti koliba
the John know-3s that swim-IPF-3s
John knows that he is swimming
- b. O Janis kseri na koliba
the John know-3s na swim-IPF-3s
John knows how to swim
- (50) a. O Janis ksehase oti koliba jimnos
the John forgot-PF-3s that swim-IPF-3s nude
John forgot that he swims/is swimming nude

⁴This claim is not uncontroversial. For example, Agouraki (1991) argues that *na* is a complementizer.

b. O Janis ksehase na koliba jimnos
 the John forgot-PF-3s na swim-IPF-3s nude
 John forgot how to swim nude

Ph-W & V note that John's swimming (nude) is presented as a fact in (49a) and (50a) whereas it is not a fact in (49b) and (50b). On the basis of such examples, Ph-W & V argue that *na*-complement clauses describe states of affairs which are not part of "our world" whereas *oti/pos*-complement clauses locate the described state of affairs in "our world".

This view is not without precedent. Christidis (1981, 1982) suggests a similar semantic distinction: *oti/pos*-complements are said to make a claim to truth whereas *na*-complements do not make such a claim.

An argument in favour of the semantics proposed by P-W and V is, as they point out, that *na*-complement clauses are generally not tensed: their temporal interpretation seems to depend on the tense of the main clause (for a couple of exceptions however see 1.4.2). For example,

- (51) a. kseri na koliba
 knows-3s na swim-IPF-3s
 he knows how to swim
- b. ikseri na koliba
 knew-PF-3s na swim-IPF-3s
 he knew how to swim

The claim that tenseless clauses locate the described state of affairs in a possible rather than the actual world has also been put forward by Huntley (1984). I will explore Huntley's position in detail in section 1.4.2.

So, the state of affairs described by the proposition expressed by *na*-complement clauses is located in a world other than the actual. Moreover, if we look closely we see that the state of affairs described by the proposition expressed by the *na*-main clauses in (39), (41) and (43) repeated below

(39) na dhoulevis oso thelis
 na work-IPF-2s as much as want-IPF-2s
 You should work/work as much as you want

(41) na ine zodano to pedhi mou
 na is-3s alive the child of mine
 May my child be alive

(43) Na ksanageniomouna
 na was born-IPF-1s again
 Would that I were born again

is other than actual as well, a point not noted by P-W and V. In (39) the speaker permits or exhorts the hearer to bring about the state of affairs described by the proposition 'you work as much as you want', which is at the time of the utterance still unrealised. In (41) the speaker merely hopes that a certain state of affairs holds. Given the information that her son was involved in a car accident, the speaker can't conclude either that he is dead or that he is alive. It is still possible that he is all right and the speaker expresses her desire that this be the case. Lastly, in (43) the proposition expressed clearly represents a state of affairs which although conceivable is not a state of affairs in the actual world.⁵

All this suggests that a unified account of the semantics of *na*-clauses is possible and that such an account should involve the notion of possible or non-actual world. However, at this point Ph-W and V do not put forward such a unifying semantic analysis of *na*-clauses. One reason might be that it was probably not obvious to Ph-W and V how the various possible attitudes expressed by *na*-main clauses could be derived from the semantic specification "possible/non-actual". I will show in chapters 2 and 3 that relevance theory provides the much needed pragmatic framework in which we can explain the various interpretations of *na*-clauses.

⁵Note that these observations mesh well with Lightfoot's idea that the subjunctive marks the absence of existential presupposition. Lightfoot's proposal is, as I have shown, too strong. The account I am about to present does not make the false claim that *na*-clauses are a type of future and allows *na*-clauses to describe states of affairs which exist in the actual world.

On the other hand, the semantic analysis proposed for *na*-main clauses by V & Ph-W (1983) cannot, in the form in which they present it, serve as the basis for a unifying semantic analysis of *na*-clauses. For one thing, it does not generalise over *na*-complement clauses. For example, in (49b) and (50b) the *na*-clause does not seem to convey any of the attitudes of desire, will, wish, curse, approval, surprise, etc. mentioned by V & Ph-W. Moreover, unless a multiple ambiguity is stipulated, it is not explained how a *na*-main clause may have all these different interpretations.

However, the semantic analysis proposed by Ph-W & V (1984) and V & Ph-W (1983) has two major advantages. The first one is that, although these authors did not argue systematically for a univocal semantic account of *na*-clauses (main and complement), they clearly aim in this direction. So, for example, already in Ph-W & V (1984: 157, my translation) we find:

"*na*-complement clauses do not differ from *na*-main clauses in meaning either: the subjunctive in independent clauses expresses the speaker's attitude towards the propositional content of his utterance....Perhaps we may accept that the sole difference between sentences like the following

a. Thelo na kolibisoun oli
want-1s na swim-PF-3pl all
I want all of them to swim

b. Na kolibisoun oli
na swim-PF-3pl all
Let them all swim

is that the speaker's attitude is explicitly expressed in the first one".

In Joseph and Philippaki-Warburton (1987) and Philippaki-Warburton (1992) *na*-clauses are treated as having a univocal semantics. So, for example in Joseph and Philippaki-Warburton (1987:180) we read:

"The formal difference between indicative and subjunctive correlates with a fundamental semantic distinction between sentences which present an action or state as factual and thus locate it in time -- present, past, or future-- and sentences which express the attitude of the speaker (in main clauses) or of the higher subject (in subordinate clauses) to an event or state which is not presented as a fact (either of the present, past, or future), but which could become a fact."

The second advantage is that their analysis tries to capture the intuition that the semantic information encoded by *na* has to do with the speaker's attitude towards the proposition expressed. In these two respects my own semantic account builds on the work of Philippaki-Warbuton and Veloudis.

1.3.3. A polysemy analysis

In Modern Greek there are two *na*'s. I have already introduced the unstressed preverbal modal particle *na*, usually taken to be the marker of the subjunctive mood. The other *na* is a presentative particle which is stressed and means something like "here's../there's", "look!", "take!", as in the following examples:

- (52) a. *Ná i Maria*
ná the Mary
Here's/There's Mary
- b. *Náti!*
ná + nom.fem.clitic
Here/There she is
- c. *Náti!*
ná + acc.fem.clitic
Here/There she is

d. Ná!
Look!/Take!

In most synchronic grammars of Modern Greek (for example, Tzartanos 1945/1989: 177-181, Triantafyllides 1941/1988: 399) this *ná* is assumed to be a deictic particle.⁶ As pointed out in Householder et al. (1964), stressed *ná* is a highly contextualised expression usually accompanied by a pointing gesture which does not register the distinction between entities and locations or the distinction between proximal and distal, as demonstrative pronouns and locative adverbs do (*aftos* "this one", *ekinos* "that one", *edo* "here", *eki* "there").

There are clear phonological and syntactic differences between the two *na*'s which are discussed in detail in Joseph (1981). Let me mention a couple. Modal *na* is unstressed and cannot appear on its own; presentative *ná*, on the other hand, receives normal word stress and can occur by itself as in (52d) above. Modal *na* occurs either directly before a verb or directly before a clitic pronoun which is governed by the following verb. For example,

- (53) a. Na figis
na go-2s-PF
Go
- b. Na ton afisoun isiho
Na him leave-3pl-PF quiet
They should leave him in peace
- (54) a. Thelo na mino
want-1s na stay-1s-PF
I want to stay

⁶A different view is put forward in Babiniotis and Kondos (1967), who consider deictic *na* to be a morpheme which attaches to pronouns thus creating the demonstrative pronoun *natos* ("here he is"), *nati* ("here she is"), *nato* ("here it is").

b. Thelo na me ksehasi
want-1s na me forget-3s-PF
I want him to forget me

Presentative *ná*, on the other hand, never occurs immediately before a verb. In addition to occurring on its own, it is found only before NPs, either a full NP as in (52a) or a pronoun as in (52b and c).⁷

Scholars agree that the two *na*'s are syntactically distinct but no consensus has been reached as to the syntactic status of stressed *ná*. In addition to the traditional view according to which stressed *ná* is a particle, Joseph (1981) argues that it is a defective transitive verb, in particular an imperative, whereas Christidis (1990) argues that it does not belong to any of the established syntactic categories and that it is better analyzed as a "holophrase". (According to Christidis (1990:67), holophrases are "highly contextualised, structurally undifferentiated, holistic forms which do not exhibit propositional structure (they are quasi-referential or quasi-predicative)".)

Despite the syntactic and phonological differences between the two *na*'s Christidis (1985, 1987) argues that they are synchronically related. The evidence for this, he claims, comes from the fact that in some expressions, like *ná sou po* ("hey! let me tell you") and *ná se rotiso* ("hey! let me ask you"), the stressed *ná* occurs instead of the unstressed *na*. This, according to Christidis, can be explained on the basis of a semantic relation between the two *na*'s. For him, the two *na*'s share a common semantic core: directionality, both *na*'s point towards something. They differ with respect to what they point to. Presentative *na* points towards the actual world, whereas subordinating *na* points towards an unrealised situation, a state of affairs which does not belong in the actual world. According to Christidis (1987:103):

⁷Also the two *na* have different origins. Preverbal *na* derives from the Ancient Greek conjunction *hina*, which was a subordinating final conjunction ("so that", "in order to") followed by the subjunctive. Presentative *ná*, on the other hand, derives from the Ancient Greek deictic particle *en*. (see Christidis 1987 and references there).

"subordinating *na* represents an abstract use ... of presentative *ná*,... it is an *abstract locative*, and more specifically, an *abstract directional locative*."⁸

It seems to me that there is practically no evidence to support this view. Modal *na* and presentative *ná* are phonologically distinct and therefore any analysis hinging on polysemy would not be a priori justified. More importantly for the purposes of this thesis, the proposed semantics of preverbal *na* is at best inadequate. In what sense does *na* "point towards" or "direct our attention" to a state of affairs which is not part of this world in (54) above? The *na*-clause in these examples simply represents a state of affairs which is not actual. What insight into the semantics of *na*-clauses do we gain by claiming that *na* "points" to such a state of affairs? How can we point to something which does not exist, anyway? In addition to the fact that there is no other motivation for the directional semantics of preverbal *na* than to somehow relate it to deictic *ná*, there is no obvious way in which this semantics could provide the basis for accounting for the several possible interpretations of independent *na*-clauses. A *na*-clause like those in (53) may in different contexts be interpreted as advice or a suggestion or a plea or an order or a wish or as issuing permission. Any pragmatic theory attempting to account for these interpretations as deriving from the directionality semantics would have to ascribe to speakers and hearers inferences of the sort "since the speaker points to a state of affairs which does not exist she is giving advice/she is suggesting something/she is pleading for something/she wants something/she is issuing permission for something", depending on the context. Such inferences, however, do not seem to be commonsensical. Moreover, on Christidis's analysis we would have to explain why preverbal *na* doesn't also point to the actual world (which would, after all, make it more semantically similar to presentative *ná*), or, even stronger, why it doesn't only point to the actual world, creating a kind of sentential counterpart to presentative *ná* + NP.

Given the analysis developed in Christidis (1985, 1987), Christidis and Nikiforidou (1993) discuss the difference in meaning between conditionals where the antecedent is a *na*-clause like (55a) and conditionals where the antecedent is

⁸A version of this proposal is adopted also in Veloudis (1987) and Philippaki-Warbuton (1992).

introduced by *an* ("if") like (55b) (note that *an* and *na* are mutually exclusive in the antecedent of a conditional):

- (55) a. *na ihate erthi pio prin tha ton vlepate*
na had come-2pl earlier will him see-IMP-2pl
If you had come earlier you would have seen him
- b. *an ihate erthi pio prin tha ton vlepate*
if had come-2pl earlier will him see-IMP-2pl
If you had come earlier you would have seen him

They argue that conditional *na* is "another case where the deictic semantics of the particle *na* survives in what is basically a subordinating use of the morpheme". In particular, "*na* serves to introduce the content of the antecedent clause in a way directly relevant to the moment of speech and the speaker's present position". I will discuss *na*-conditionals in chapter 2 and I will show that this is not the way in which *na* contributes to the meaning of a conditional. For now I mention this analysis of *na*-conditionals as an example of the proliferation of senses of (at least) the preverbal *na* to which a polysemous approach leads. Notice, furthermore, that the two possible senses of preverbal *na*, i.e. pointing towards an unrealised event and pointing towards the moment of speech and the speaker's present position, are incompatible if not contradictory. For methodological reasons, usually referred to as Modified Occam's Razor, an analysis which stipulates distinct meanings for the same lexical item, is only to be preferred if a pragmatic explanation of the several meanings/interpretations is not possible. This thesis is an attempt to show that such an account is indeed possible for *na*-clauses.

1.4. A relevance-oriented semantic account of mood

In this thesis I want to put forward and defend a new account of the semantics of *na*-clauses (and the way they contrast with non *na*-clauses). My analysis is based on the approach to semantics advocated in relevance theory. So, I will first present some basic ideas about what semantics is and should do.

1.4.1. Semantics and relevance theory

One of the basic assumptions (Sperber and Wilson 1986, Wilson and Sperber 1993, Carston 1988, Blakemore 1987, 1992) within relevance theory is that the linguistic properties of utterances vastly underdetermine what speakers actually intend to say with their utterances ⁹ (I am leaving aside for the moment what speakers intend to communicate implicitly with their utterances. I will discuss this in detail in chapter 2). For example, consider the following:

- (56) a. Paul has a headache
 b. Leave it there, please
 c. This will help you relax

In order to understand (56a), the hearer has to determine which individual the speaker intended to pick out with the name "Paul". To recover what is said by (56b), the hearer has to infer what the speaker intended to refer to with the pronoun "it" and decide where "there" is supposed to be. To grasp the content of (56c), the hearer has to determine what the speaker is referring to with "this" and who "you" is. The hearer will not be able to recover the proposition expressed by each of the utterances in (56) unless he determines the intended referent of the referential expressions. The task of assigning reference is clearly constrained by the semantic properties of referential expressions (for example "you" linguistically encodes that it picks out the addressee) but it crucially depends on the context of the utterance and the hearer's inferential abilities. No semantic rule could possibly be built to predict the actual referent of any referential expression on any given occasion. Reference assignment is one of the inferential tasks that hearers usually have to perform in order to recover the meaning of an utterance.

Another such task is disambiguation. Consider (57a and b):

- (57) a. He gave you a ring yesterday
 b. The food is hot

⁹The underdeterminacy thesis is also held by people who are not working within relevance theory. For example, Atlas (1979, 1989) and Récanati (1989b).

To recover the meaning of (57a) the hearer has to determine which of the two senses of the word "ring" the speaker intended. Similarly, processing (57b) the hearer will have to decide whether the speaker intended to say that the food is too spicy or too warm. Clearly, the hearer cannot be said to have understood (57a) or (57b) before he determines what sense of the ambiguous word was intended by the speaker. Disambiguation, like reference assignment, crucially depends on the hearer's ability to evaluate hypotheses about the speaker's communicative intention in the particular situation of utterance.

Now consider the examples under (58):

- (58)
- a. She is
 - b. No messages
 - c. Building number 10
 - d. John
 - e. In the garden
 - f. On Wednesday

(58a-f) may be perfectly appropriate utterances despite the fact that they are sentence fragments. It is, however, impossible to understand what proposition the speaker intended to express with each of these utterances, if we don't know the situation in which they were uttered. The linguistic properties of these utterances provide the hearer with the barest outline of the complete proposition the speaker intended to communicate. So, take for example (58d). (58d) could be an appropriate answer to at least all the questions in (59):

- (59)
- a. Who is responsible for area D?
 - b. Who did you meet yesterday?
 - c. Whom are you having lunch with tomorrow?
 - d. Who saved Jane from certain death?

In the context of each of these questions the speaker of (58d) is expressing a different proposition. Similar considerations hold for the rest of the examples. To grasp the meaning of such utterances, the hearer has to recover, on the basis of the context, material which is left out of the actual utterance, material which is, in

other words, ellipsed. Moreover, he has to recover the appropriate material, i.e. he has to determine what was the full proposition the speaker intended to communicate in the particular situation.

Consider also the examples in (60):

- (60) a. Paul's book is on the shelf
b. This box is too heavy

Interpreting (60a) the hearer has to determine what kind of relation holds between Paul and the book: Does Paul own the book, is he the writer of the book, is it the book that Paul is reading, is it the book that Paul always talks about, etc. Finally, uttering (60b), the speaker may intend to communicate that the box is too heavy for her to lift, or too heavy to be put on the back of her bike, or too heavy to send by air mail, etc. The expressions "Paul's book" and "too heavy" are somehow semantically vague. The semantic representations of these sentences have to be enriched before the hearer is able to recover the proposition expressed.

In performing such inferential tasks as reference assignment, disambiguation, recovery of ellipsed material and resolution of vagueness the hearer is not simply trying to construct a truth evaluable representation on the basis of the speaker's utterance. Rather, he is trying to recover THE truth evaluable representation that he may reasonably assume the speaker intended to communicate. This is very obvious in the following examples:

- (61) a. It takes some time to get to the zoo on a Saturday morning
b. I've had breakfast
c. I've been to Tibet
d. There's nothing on television tonight

All these utterances express truth evaluable propositions (once the referent of "I" in (61b and c) has been fixed). However, we tend to understand the speaker of (61a) as saying that it takes longer than normal to get to the zoo on a Saturday morning. And we tend to understand (61b) as saying that the speaker had breakfast the morning of the utterance and (61c) as saying that the speaker has been to Tibet at some point in her life. Uttering (61d), finally, the speaker is taken

to have said that there is nothing worth watching on television on the night of the utterance. In such cases the semantically encoded content of the utterance is enriched by the hearer on the basis of the situation of utterance and pragmatic considerations. It is such examples which provide us with the clearest evidence that the linguistic properties of utterances underdetermine what speakers intend to say with them.

It should be clear from the discussion so far that standardly sentences do not have determinate truth-conditions. Many of the examples we considered above are not even complete sentences but rather sentence fragments and practically none of them can be assigned truth-conditions in isolation. The linguistic expression uttered provides hearers only with some evidence, sometimes very fragmentary, about what proposition the speaker intends to express. And it is this proposition that the hearer needs to recover; not just any truth evaluable representation will do. To recover that proposition simple decoding is not enough. The inferential tasks of reference assignment, disambiguation, resolution of vagueness and recovery of ellipsed material which are presumably driven by some general communicative/pragmatic principle(s) have to take place.

Such considerations motivate Sperber and Wilson's distinction between "Linguistic Semantics" and "Semantics of Mental Representations". Linguistic semantics has to do with the mapping of words onto concepts and sentences onto (generally incomplete) structured conceptual representations, i.e. with linguistically encoded meaning. It is part of the grammar, representing the speaker's semantic competence, and therefore psychologically real.¹⁰ The output of linguistic decoding is partially articulated conceptual representations, usually referred to as logical forms. For example, the logical form of (58a) might be:

(62) _____ IS _____¹¹

¹⁰Linguistic semantics is "translational" in the sense of Lewis (1972). For a justification of this property of linguistic semantics as well as the general philosophical framework in which it is placed (Fodor's language of thought) see Clark (1991: 17-20).

¹¹Pronouns like "she" in (58a) have been argued to encode procedural information, as I will explain shortly. They therefore do not appear in the logical form of the utterance which is a conceptual representation, though, clearly, they will constrain its development into a fully propositional form. The conceptual-procedural distinction will be discussed in detail later in this section.

Logical forms are clearly not capable of being true or false. Such incomplete semantic representations serve as input to the pragmatic processes mentioned earlier and the two together yield propositional forms, i.e. semantically complete and therefore truth evaluable conceptual representations. These conceptual representations are thoughts and as such do have truth conditions. The semantics of mental representations has to do with the mapping of complete mental representations, i.e. thoughts, onto their sets of truth conditions. According to Sperber and Wilson, the semantics of mental representations is not psychologically real in the sense that it is not represented in the mind. As Carston (1988) points out, a speaker's knowledge of the meaning of a sentence may be best demonstrated by his ability to specify the state of affairs it describes, but it does not follow that this is what a speaker's semantic knowledge consists in. Moreover, if the truth conditions of our thoughts were representations, then our semantics would go into infinite regress. The idea that truth conditional semantics tries to capture is that we use language in order to communicate about the world. So, the only way in which truth conditions may be useful is if they are not psychologically real; only then can we use this machinery to explain how language relates to the world.

These two semantic levels are mediated by pragmatic inference, which is driven by a single communicative, and ultimately cognitive principle, the principle of relevance. I will discuss the principle of relevance in great detail in chapter 2.

On this view, there is a clear distinction between semantics and pragmatics. Natural language semantics is autonomous with respect to pragmatics. However, the semantics-pragmatics distinction on the relevance view does not coincide with the Gricean distinction between "what is said" and "what is implicated". For Griceans, pragmatics is concerned with the implicatures of an utterance, and pragmatic principles, the conversational maxims, play a role in the derivation of implicatures only. For Sperber and Wilson (1986, Wilson and Sperber 1981), the role of pragmatic principles is not only to account for the recovery of implicitly communicated propositions but also to account for the inferential relation between the logical form of an utterance and the proposition it is used to express explicitly. Pragmatic principles contribute not only to the derivation of the implicatures of an utterance but also to the recovery of its explicitly communicated content.

So, we are assuming that utterances, or rather the thoughts these utterances represent, have truth-conditions. A question that arises here is whether all meaning is truth-conditional. Are there any linguistic devices or constructions which are meaningful but which do not contribute to the truth-conditions of an utterance? The standard answer is yes. A list of some of the linguistic constructions which encode non-truth-conditional meaning is to be found in Wilson and Sperber (1993) and Wilson (1991b):

A. Discourse/pragmatic connectives

- (a) It is Sunday *but* the shops are open
- (b) Sue can pay the rent. *After all*, she has a job
- (c) Mary bought a flat. *Moreover*, she bought a car.

B. Illocutionary and attitudinal adverbials

- (a) *Frankly*, the pizza is not edible
- (b) *Unfortunately*, my application was rejected

C. Illocutionary and attitudinal particles

- (a) John is clever, *eh?*
- (b) John is reliable, *huh!*

D. Non-declarative sentence types

- (a) Is Mary a student?
- (b) Where is Mary?
- (c) Don't touch the pan
- (d) How handsome you are!
- (e) May she live to be a hundred
- (f) Would that I could find the way back home

It is clear in view of such data that an adequate semantic theory should be able to account for both truth-conditional and non-truth-conditional meaning. It is standardly assumed that all non-truth-conditional meaning is of the same nature and therefore can be analyzed uniformly. In fact, within speech act semantics all the constructions which encode non truth conditional meaning are treated as

illocutionary force indicators (Searle 1979b, Urmson 1963, Bach and Harnish 1979, Lyons 1977, Récanati 1987, Vanderveken 1990). A parallel line of investigation is suggested by Grice's notion of conventional implicature. Grice (1975/1989) argues that connectives like "but" and "therefore" carry conventional implicatures, i.e. although their meaning is derived by decoding, it does not contribute to the truth-conditional content of the utterance but rather to its implicatures. So, all non-truth-conditional meaning is seen as contributing to the implicitly communicated content of an utterance. The speech act and the Gricean accounts are meant to be compatible. Grice himself (1989) links the notion of conventional implicature to the notion of speech act. He considers conventional implicatures as corresponding to a set of non-basic, non-central speech acts (as opposed to the central speech acts of asserting, asking and telling which are indicated by declarative, imperative and interrogative mood). So, for example, "however" indicates the non-central speech act of contrasting.

Wilson and Sperber (1993) and Wilson (1991b, 1992), however, argue that not all non-truth-conditional meaning is cut to the same pattern. In fact, they argue that we cannot account for linguistically encoded meaning on the basis of the distinction between truth-conditional and non-truth-conditional meaning in a satisfactory way. There are, according to them, four distinct categories of linguistically encoded meaning which are obtained from the interaction between two basic distinctions: the explicit-implicit distinction and the conceptual-procedural distinction.

I will first give the definitions for the notions of explicature and implicature. In *Relevance* (1986:182), Sperber and Wilson give the following definition of explicitness:

An assumption communicated by an utterance U is explicit if and only if it is a development of a logical form encoded by U.

Wilson and Sperber (1993) and Wilson (1991b, 1992) treat the notion of explicature in greater detail:

A proposition communicated by an utterance is an explicature if it is either (a) the proposition expressed by the utterance (i.e. its truth conditional content, "what is said"), or (b) the result of embedding this proposition under one of a small class of descriptions, e.g. those containing speech act or propositional attitude verbs

So for example, consider the following dialogue:

- (63) Peter: Will you come to the party tonight?
Mary (happily): I don't have any lectures tomorrow

Mary's utterance might convey the following explicatures:

- (64) a. Mary doesn't have any lectures on the following day
b. Mary is saying that she doesn't have any lectures the following day
c. Mary is saying happily that she doesn't have any lectures on the following day
d. Mary believes that she doesn't have any lectures on the following day
e. Mary is happy that she doesn't have any lectures on the following day

(64a) is the proposition expressed by the utterance, or the basic explicature of the utterance. (64b-e) are higher level explicatures, i.e. explicitly communicated propositions which are constructed by embedding the proposition expressed by the utterance under a speech act or propositional attitude description. The explicatures of an utterance are obtained partly by decoding and partly by inference. So, to recover (64a), the hearer must not only decode the utterance but also infer the referent of "I"; to obtain the higher level explicatures in (64b-d) the hearer must make additional inferences about the speech act the speaker is performing or about the speaker's attitude towards the proposition expressed. Both the basic explicature and the higher level explicatures of an utterance are conceptual representations and therefore truth-evaluable in their own right. However, only the proposition expressed is seen as the truth conditional content of the utterance with which it is associated. For example, Mary's utterance in (63) will be true if and only if the proposition in (64a) is true. So, on this view, the meaning encoded by a word

makes a contribution to the truth-conditions of the utterance if and only if it contributes to the proposition expressed by an utterance.

The implicatures of an utterance, on the other hand, are all those propositions communicated by that utterance which are not inferential developments of its logical form. For example among the implicatures of Mary's utterance in (63) may be:

- (65) a. Mary will go to Peter's party
b. Mary will stay late at the party
c. Mary can drink a lot at the party

The implicatures of an utterance are also truth-evaluable mental representations which, however, do not contribute to the truth conditions of the utterance. (In this respect they are similar to higher level explicatures).

Let me now move on to the distinction between conceptual and procedural information (Sperber and Wilson 1986, Wilson and Sperber 1988a, Wilson and Sperber 1993, Wilson 1991b, 1992, Blakemore 1987, 1988, 1989, 1992, Blass 1990, Moeschler 1989a,b, Luscher 1989, Rouchota 1990)). According to Sperber and Wilson (1986) and Wilson and Sperber (1993), utterance interpretation involves the construction and manipulation of conceptual representations. As I pointed out earlier, the explicatures of an utterance are derived by a combination of linguistic decoding and inference and the implicatures entirely by inference. This opens up the possibility that linguistically encoded information may contribute to the interpretation process either by forming part of a decoded conceptual representation or by providing information on the manipulation of conceptual representations, i.e. by offering guidance on inferencing.

Most words encode concepts. So, *book* encodes the concept BOOK and *write* the concept WRITE. Conceptual representations differ from other kinds of representation, such as phonetic or syntactic representations, in the following respects: (a) they have concepts as their constituents (rather than syntactic categories or phonetic features), and (b) they have logical and truth-conditional properties, i.e. they enter into relations like entailment or contradiction, they act as input to inference rules, they can describe or partially characterise a certain state

of affairs. The proposition expressed, the higher level explicatures and the implicatures of an utterance are conceptual representations.¹²

Words encoding conceptual information may or may not contribute to the truth conditions of an utterance. Words like *book*, *chair*, *run* encode concepts and contribute to the truth conditions of the utterances in which they occur. Illocutionary and attitudinal adverbials, such as the ones under B, encode conceptual information which, however, contributes to the higher level explicatures of the utterances where they occur (so, they do not contribute to the truth conditional content of the utterance - for a full account see Wilson 1991b, Wilson and Sperber 1993 and Ifantidou 1993a,b). In both of these cases conceptual information contributes to the explicitly communicated content of the utterance. It may also turn out that conceptual information can contribute to the implicatures of an utterance. Wilson (1991b) suggests that the word *yet* may be a plausible candidate, although, as she points out, one would need to find more examples to support the existence of such a category of meaning.

Some words encode procedural information, i.e. information on how to manipulate, how to "take" a conceptual representation. Procedural information is best understood as a way of constraining or guiding the inferential phase of communication. As we have seen, on the relevance view, inference plays a crucial role in the derivation of both the explicitly and the implicitly communicated content of an utterance. So, we would expect to find, on the one hand, words which encode procedural meaning and constrain the derivation of the explicatures of an utterance (proposition expressed and higher level explicatures) and, on the other hand, words which encode procedural meaning and constrain the derivation of the implicatures of an utterance. Indeed, this is the case.

Blakemore (1987, 1988, 1989, 1992) has argued convincingly that discourse connectives, such as the ones under A, contribute to the interpretation process solely by indicating to the hearer what context and contextual effects he is expected to recover. So, for example, the function of (the "denial of expectation") *but* in (Aa) is to indicate that the proposition it introduces ("the shops are open") must be processed in a context in which it contradicts and eliminates an implication of the previous proposition ("It's Sunday"). The function of *moreover* in (Ac) is to

¹²The logical form or semantic representation of an utterance is, as explained earlier, an incomplete conceptual representation.

indicate that the two propositions must be processed in the same or similar contexts, giving rise to the same or similar effects. Such discourse connectives do not contribute to the truth conditions of the utterances in which they occur.

On the other hand, it has been argued that pronouns such as "I" and "he" encode procedural information which contributes to the proposition expressed by the utterance (and therefore, to its truth-conditional content). (For arguments against a conceptual and in favour of a procedural account of pronouns see Wilson and Sperber 1993 and references there). In order to decide what proposition the speaker intended to express with an utterance like "He is married", the hearer has to decide on the intended referent. Pronouns leave a gap in the semantic representation of an utterance, which has to be filled by inference. Their function is to guide the inference process by narrowing down the class of hypotheses the hearer has to consider. For example, the information encoded by "he" guides the search for the intended referent by narrowing down the set of candidates the hearer has to consider: he should only consider males.

On the other hand, non declarative sentence types, such as those under D, have been argued (Wilson and Sperber 1988a, Clark 1991) to encode procedural information which contributes to the higher level explicatures of an utterance. Since the meaning encoded by mood indicators guides the construction of higher level explicatures, it does not contribute to the truth-conditions of the utterance. I will discuss non-declaratives in detail in the next section, where I will also argue that *na*- and non *na*-clauses may be analyzed in the same way. Some attitudinal and illocutionary particles like the ones in C probably contribute to the interpretation process along similar lines (Wilson and Sperber 1993: 22-23).

So, we end up with four categories of linguistically encoded meaning: (a) conceptual and explicit, (b) procedural and explicit, (c) conceptual and implicit and (d) procedural and implicit. From the point of view of linguistic semantics these four categories are exhaustive. I will show in the next section that the information encoded by *na*-clauses belongs to category (b). It is non-truth-conditional information which contributes to the interpretation process by guiding the hearer to construct a certain type of higher level explicatures.

1.4.2. Relevance theory and the semantics of *na*-clauses

Since my analysis of *na*-clauses is a subcase of the analysis of non-declaratives proposed in Sperber and Wilson (1986) and Wilson and Sperber (1988a), I will start by taking a closer look at the latter.

Talking about the relation between illocutionary force and sentence type Sperber and Wilson (1986: 247) express their doubt as to whether there is such a thing as "a well defined range of mutually exclusive syntactic sentence types" (Sperber and Wilson 1986:247):

"What undeniably exists is not a well-defined range of syntactic sentence types but a variety of overt linguistic devices- e.g. indicative, imperative or subjunctive mood, rising or falling intonation, inverted or uninverted word order, the presence or absence of Wh-words, or of markers such as 'let's' or 'please'- which can guide the interpretation process in various ways."

Wilson and Sperber (1988a) argue that semantic accounts of declaratives, imperatives and interrogatives based on speech act theory are inadequate. They show that there is no direct semantic link between such "sentence types" and the illocutionary force that utterances of such sentences may have. They propose instead that there is a direct semantic link between linguistic form, i.e. declarative, imperative and interrogative syntax, and propositional attitude. According to Wilson (1992) there are two types of propositional attitudes: descriptive and interpretive.¹³

¹³This follows from the relevance theoretic claim that there are two uses of representation: descriptive and interpretive. According to Sperber and Wilson (1986:228):

"Any representation with a propositional form, and in particular any utterance, can be used to represent things in two ways. It can represent some state of affairs in virtue of its propositional form being true of that state of affairs; in this case we will say that the representation is a *description*, or that it is used *descriptively*. Or it can represent some other representation which also has a propositional form - a thought, for instance - in virtue of a resemblance between the two propositional forms; in this case we will say that the first representation is an *interpretation* of the second one or that it is used *interpretively*."

The distinction between description and interpretation will be discussed in more detail in chapter 3.

Descriptive attitudes are attitudes towards states of affairs in the world whereas interpretive attitudes are attitudes towards mental representations. States of affairs are objects that exist (or might exist). There are several ways in which one might think of a state of affairs. It might hold in this world, i.e. the actual world; or it might obtain in a desirable world, i.e. a world which is desirable from someone's point of view; or it might be located in a potential world, i.e. a world which is compatible with the speaker's assumptions about the actual world and could therefore become true; or it may hold in a possible, i.e. a conceivable, world. Mental representations, on the other hand, are representations with logical properties.

According to Wilson and Sperber (1988a), both descriptive and interpretive attitudes are necessary for an adequate semantic account of declarative, imperative and interrogative sentences. Declaratives and imperatives encode particular types of descriptive attitudes whereas interrogatives encode a special kind of interpretive attitude. On this account, a declarative encodes the information that it represents a state of affairs in the actual or some possible world. An imperative encodes the information that it represents a state of affairs in a potential and desirable world. An interrogative encodes the information that it represents a relevant thought. The meaning encoded by declaratives, imperatives and interrogatives is non-truth-conditional and procedural: it constrains the derivation of those higher level explicatures of an utterance which contain information about propositional attitude.

The semantics of declaratives, imperatives and interrogatives and how they interact with the semantics of *na*- and non *na*-clauses will be discussed in detail in chapters 2 and 3 respectively. For the moment, let me take an imperative and illustrate how the account proposed by Wilson and Sperber works. Suppose that Henry has been complaining that it is too hot in this room and has let you know that he would like to turn off the heating. You have been ignoring him so far but in the end you say:

(66) Ok. Turn down the heating

We would normally interpret this utterance as giving the hearer permission to turn down the heating. Here's how the interpretation process develops on the relevance view. Decoding the utterance the hearer will recover that a world in which he turns

down the heating is desirable and potential. Notice that desirability is a three place relation: something is desirable to someone to some degree. The hearer will resolve this semantic indeterminacy on the basis of pragmatic considerations. In this context, the hearer will probably form the hypothesis that the described state of affairs is considered by the speaker to be desirable to him (the hearer) to a high degree. The fact that Henry wanted to turn down the heating was in a sense already given in the context, therefore this hypothesis must be the most readily available one to the hearer as far as the speaker could have foreseen. Moreover, interpreting (66), the hearer may reasonably assume that in uttering the imperative the speaker intends to grant the potentiality of the state of affairs, i.e. she intends to communicate that, as far as she is concerned, turning down the heating is a potential state of affairs and so it may become true. Because the desirability is resolved in favour of the hearer and the speaker is the one who grants the potentiality of the described state of affairs, this imperative has the illocutionary force of giving permission - different ways of resolving such semantic indeterminacies will yield different interpretations, as we will see in connection with *na*-clauses used instead of the imperative in chapter 2. In this case the hearer will accept this hypothesis about the interpretation of the utterance as it is easily accessible and reasonable. Obviously, on this account the semantics of imperatives vastly underdetermines their actual interpretations. To give a detailed explanation of how such an imperative is interpreted we need to invoke a full fledged pragmatic theory. I will do this in chapter 2.¹⁴

In this thesis I want to propose the view that what is traditionally called the subjunctive mood in Modern Greek encodes non-truth-conditional procedural meaning which contributes to the interpretation process by guiding the hearer towards the construction of a certain type of higher level explicatures rather than others. Like imperatives, declaratives and interrogatives, *na*-clauses constrain those higher level explicatures of the utterance which contain information about propositional attitude. In particular *na*-clauses encode a special kind of descriptive attitude in much the same way as declaratives and imperatives have been argued to by Wilson and Sperber (1988a). On the basis of the discussion in section 1.3.3.

¹⁴The relevance-theoretic approach to non-declaratives has been successfully further explored in relation to pseudo-imperatives, exclamative inversions, and the *let* and *let's*-constructions by Clark (1991, 1993a,b).

and additional evidence to be presented shortly, my proposal is that a *na*-clause encodes the information that it represents a thought which is entertained as a description of a state of affairs in some possible world.

This way of defining non-indicativeness is not entirely new. It was first put forward in a systematic way by Huntley (1984) in his study of the English imperative. According to Huntley (1984:109):

...an indicative clause, even in the future tense, represents a situation (truly or falsely) as obtaining in the actual world (thought of as historically extended), whereas the non-indicative clause represents it as being merely envisaged as a possibility with no commitment as to whether it obtains in past, present or future in the actual world."¹⁵

Huntley's claim is based on the observation that whereas indicative clauses may be said to be true or false non-indicative ones may not. Consider:

- (67) a. That the window is broken is true/false
b. *The window's being broken is true/false
c. *To break the window is true/false
d. *That John break the window is true/false

In English gerunds, infinitival clauses and non-finite *that*-clauses are non-indicative clauses and as such "represent a state of affairs as merely envisaged as a possibility".

On the basis of such observations Huntley (1984: 120) claims that:

"[Non indicatives, VR] are distinguished from the indicatives by the absence of the indexical reference to the actual world which is characteristic of the latter"

¹⁵Donhauser (1987) puts forward an analysis of indicativeness and nonindicativeness in German based on Huntley's proposal.

Huntley's arguments carry over to the MG data. Consider (68a) and (68b):

- (68) a. Oti to parathiro ine spasmeno ine alithia
that the window is broken is true
That the window is broken is true
- b. *na ine to parathiro spasmeno ine alithia
na is the window broken is true
*for the window to be broken is true

Non *na*-clauses may be said to be true or false; *na*-clauses, however, may not. So, there is initial evidence that a *na*-clause represents a state of affairs as possible, i.e. as simply conceivable, whereas a non *na*-clause represents a state of affairs as actual.

Further support for the claim that *na*-clauses represent states of affairs in possible worlds comes from *na*-complement clauses. Verbs or predicates of desire, wish, obligation, ability, possibility, request, precaution, prevention and modal verbs, i.e. verbs which entail or encode non-actuality, take only *na*-complement clauses. For example,

- (69) a. O Janis theli/epithimi/efhete na pantrefti ti Maria
The John want/desire/wish-3s na marry-PF-3s the Mary
John wants/desires/wishes to marry Mary
- b. Se diatazo/ipohreono/paparakalo na paretithis
you order/oblige/plea-1s na resign-2s-PF
I order/oblige/plead with you to resign
- c. Prosehe na min glistrasis
take care-2s na not slip-2s-PF
Take care not to slip

d. Me embodise na se do
me prevented-3s na you see-2s-PF
He prevented me from seeing you

e. Bori/Prepi na figi
may-imp/must-imp na go-3s
He may/must go

f. Ine dinato/pithano na pame diakopes
is potential/possible na go-1pl-PF holiday
It is potential/possible (for us) to go on holiday

Moreover, in connection with those verbs which may take either type of complement, there are striking differences in meaning depending on whether a *na* or a non *na*-complement is selected. Consider, for example, the verbs of believing and saying in (70), the verb "know" in (71) and the verbs "be happy/be sad" in (72):

(70) a. Pistevo/nomizo/leo oti tha figi o Kostas avrio
believe/think/say-1s that will go-3s-PF the Kostas tomorrow
I believe/think/say that Kostas will leave tomorrow

b. Pistevo/nomizo/leo na figi o Kostas avrio
believe/think/say-1s na go-3s-PF the Kostas tomorrow
I believe/think/say that Kostas should leave tomorrow

(71) a. O Petros kseri oti magirevi
The Peter know-3s that cook-3s-IPF
Peter knows that he is cooking

b. O Petros kseri na magirevi
the Peter know-3s na cook-3s-IPF
Peter knows how to cook

- (72) a. Herome/Stenohorieme pou se vlepo etsi
 be happy-1s/be sad-1s that you see like this
 I am happy/sad that I see you in this situation
- b. Herome/Stenohorieme na se vlepo etsi
 be happy-1s/be sad-1s na you see like this
 I am happy/sad to see you in this situation

Interestingly, causatives and verbs like *continue* and *be bored*, the complement of which clearly describes an actual state of affairs, take *na*-complements; verbs of perception may also take *na*-complements:

- (73) a. Ton ekana na hasi to telefteo leoforio
 him made-1s na miss-3s-PF the last bus
 I caused him to miss the last bus
- b. Sinehizi/eksakolouthi na vrehi
 continue-imp na rain-imp-IPF
 It continues to rain
- c. Varethika na se perimeno
 be bored-1s na you wait-1s-IPF
 I was bored with waiting for you/to wait for you
- d. Vlepo ton Kosta na erhete
 see-1s the Kostas na come-3s-IPF
 I see Kostas coming
- e. Akouo tin Maria na pezi piano
 hear-1s the Mary na play-3s piano
 I (can) hear Mary playing the piano

Such examples are crucial for the analysis I will present in chapter 2 and will be further discussed there. For now note that these cases do not constitute a

counterexample to the semantic analysis proposed here for *na*-clauses: the actual world is one of the possible worlds. Moreover, note that in the corresponding English sentences you also get a non-indicative clause, either the infinitive or the gerund.

Additional evidence for the proposed semantics comes from the subordinate clauses in which *na*-clauses may occur. Purpose clauses are only in the subjunctive. For example:

- (74) O Janis pige stin Athina gia/me to skopo na spoudasi
The John went to Athens for/in order na study-1s-PF
John went to Athens in order to study

On the other hand, causal clauses are always non *na*-clauses. Consider:

- (75) O Janis tha paretithi giati/epidi/dioti (*na) perni liga lefta
The John will resign because (*na) earn-3s-IPF little money
John will resign because he earns very little money

Conditional clauses and restrictive relative clauses may be either in the indicative or in the subjunctive. I will come back to conditionals in chapter 2 (for a couple of examples see section 1.3.3). Restrictive relative clauses will be considered in great detail in chapter 5. Finally, temporal clauses may be either in the subjunctive or in the indicative depending on the complementizer: *otan* "when", *afou* "after" and *molis* "at the moment that" do not allow *na*-clauses, whereas *prin* "before" takes only *na*-clauses and *mehri* "until" may take either a *na* or a non *na*-clause. For example:

- (76) a. O Petros tha vgi sti skini otan/afou/molis (*na) milisi i Anna
The Peter will come out-3s at the stage when/after/at the moment (*na)
talk-3s-PF the Anna
Peter will appear on the stage when/after/at the moment when Anna will
talk

b. O Kostas efige prin na ksimerosi

The Kostas left-3s before na was dawn-imp

Kostas left before it was dawn

c. Mehri na gini/pou tha gini eniliki den tha tis poun tipota

until na become-3s-PF/ that will become-3s-PF adult not will her say-3pl
nothing

Until she comes of age, they will say nothing to her

According to Huntley (1984: 117), the semantic contrast between indicatives and non-indicatives correlates with the presence in the former and the absence in the latter of the auxiliary modal and tense elements. (The presence of *do* in negative imperatives is not inconsistent with this claim, as Schmerling (1977) has shown). This argument seems to carry over to the MG data only partially. Non *na*-clauses are always tensed.

(77) O katadikos drapetevi/drapetefse/tha drapetefsi

the prisoner escape-3s/escaped-3s/will escape-3s

The prisoner escapes/escaped/will escape

Independent *na*-clauses also carry tense specification. The verb in (78a) has non-past tense morphology, and the verbs in (78b-d) have past tense morphology:

(78) a. na htenizese/na htenistis

na comb your hair|PF/PF

You should comb your hair (regularly)/(now)

b. Isos na efige (htes)

na left-PF-3s (yesterday)

Perhaps he left (yesterday)

c. na pige o Janis me ti Maria sto theatro (htes)?
 na went-PF-3s the John with the Mary to the theatre (yesterday)
 Is it possible that John went to the theatre with Mary (yesterday)?

d. Ah, na imouna pali neos
 ah, na were-1s again young
 Would that I were young again

The temporal interpretation of (78a-c) depends on the tense of the verb, whereas the imperfective past tense in (78d) is not deictic.

Na-complement clauses, on the other hand, generally carry non-past tense specification and depend for their temporal interpretation on the tense of the embedding predicate (like infinitival clauses in English). Consider, for example, (79) and all the examples of complement *na*-clauses given in this section so far (except for (69a)):

(79) a. Apofasisa/arnoume na katharizo/kathariso/*katharisa
 decided-1s/refuse-1s na clean-1s-IPF/clean-1s-PF/*cleaned-1s
 I decided/refuse to clean (regularly)/(now)

However, complement *na*-clauses may be marked for past tense as we can see in (80):

(80) a. Bori/Prepi na efige
 can-imp na went-PF-3s
 It may be that he left

b. Apokliete na evrekse
 excluded-imp na rained-PF-imp
 It is impossible/out of the question that it rained

c. Elpizo/efhome/pistevo na eftase stin ora tou to gramma
 hope/wish/believe-1s na arrived-3s on the time its the letter
 I hope/I wish that the letter arrived on time

I do not think that the fact that *na*-clauses may be tensed is counterevidence to the proposed semantic analysis. For one thing, Huntley (1984: 119-121) argues that although the presence vs absence of tense correlates with the semantic contrast between indicative and non-indicative clauses, the latter gives rise to an independent semantic contrast:

"The presence of tense in the former [indicatives, VR] requires specification of a time in order to fix the intension; the absence of tense in the latter [non-indicatives, VR] corresponds to the absence of such a requirement... However, I submit that the indicative/non-indicative mood distinction itself gives rise to another, independent semantic contrast, one which is the world deictic analogue of the time-deictic contrast between tensed and tenseless clauses." (Huntley 1984: 119-120)

One of the arguments that Huntley (1984: 120-121) puts forward to support this claim is that tense is not the only way to anchor a proposition to a point in time. Temporal deictic adverbs are another source of temporal reference and non-indicatives do take deictic adverbs. Consider the examples in (81) from Huntley (1984: 114),

- (81) a. Do the job tomorrow/*yesterday
b. Last week Bill demanded that you do the job yesterday
c. Last week Bill asked you to do the job yesterday

If this is correct, and time deixis is indeed independent from world deixis, then I don't see why non-indicatives may not be tensed. The lack of tense elements may turn out to correlate regularly with non-indicatives but it does not have to be a necessary property of non-indicatives.

It is worth noting here that the claim that non-indicatives in English are not marked for tense is not unchallengeable. Stowell (1982) argues that infinitives do have tense specification under COMP. The tense of an infinitive clause is that of a "possible or unrealised future". Moreover, Salkie (1989) argues that the perfect and the pluperfect in English should be analyzed as tense rather than aspect. If he

is right then the correlation between non-indicative clauses and absence of tense breaks down, since at least the perfect may occur in non-indicative clauses:

- (82) a. Please, don't have made things worse (Wilson & Sperber 1988:81)
b. To have arrived yesterday/the previous day was no small achievement
(Salkie 1989:12)
c. John wants you to have finished your homework by 5.00
(Huntley 1984:115)

Moreover, my analysis of indicatives and subjunctives in MG is placed within the relevance theoretic framework. In this framework world deixis is conceived of as propositional attitude information. Given that tense is a property of the proposition itself whereas communicating that the represented state of affairs is actual or possible is an attitude towards that proposition, I don't see why a proposition describing a state of affairs regarded as possible cannot be tensed.

Let me now turn briefly to indicative or non *na*-clauses. Huntley's claim that an indicative clause represents a situation (truly or falsely) as obtaining in the actual world cannot be quite right in view of examples like the following:

- (83) a. ean o Kostas ine arrostos tha hasi to sinedrio
if the Kostas is ill will miss-3s-PF the conference
If Kostas is ill he will miss the conference
- b. O kaliteros sou filos ehi AIDS. Ti kanis?
the best yours friend has-3s AIDS. What do-2s?
Your best friend has AIDS. What do you do?
- c. Enas Tourkos, enas Jermanos ki enas Ellinas nikiasan ena aeroplano...
A Turk, a German and a Greek hired-3pl a plane...
A Turk, A German and a Greek hired a plane...
- d. Ine pithano oti o proedros tha paretithi
is possible that the president will resign
It is possible that the president will resign

e. *Ipokrithika oti imoun o antras tis*
 pretended-1s that was-1s the husband hers
 I pretended that I was her husband

The indicative in the antecedent of a conditional as in (83a), in supposition as in (83b), in jokes and fiction in general as in (83c), in the complement of verbs like those in (83d-e) cannot be said to present a state of affairs as obtaining in the actual world. Although I am not going to discuss the interpretation of such examples in any detail, I propose that indicative clauses are better seen as presenting states of affairs as obtaining in the world in which the speaker is . . . Let us call this the base world. By default the base world is the actual world. This is why indicative clauses are usually understood as describing states of affairs which exist in the actual world. However, in (83a) the base world is the world set up by the conditional clause, in (83b) and (83c) the base world is a possible world, in (83d) "it is possible" sets the base world to possible, in (83e) the state of affairs described in the complement clause obtains in a world which although not in fact the actual is claimed to be the actual (a "make-believe" world), as follows from the meaning of *pretend*, etc.

I have argued so far that *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a possible world, whereas indicative clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in the base world¹⁶. I now want to argue that the information encoded by *na* is procedural rather than conceptual.

¹⁶ I am not sure that we need to say that indicative clauses encode the information that the proposition they express is entertained as a description of a state of affairs in the base world. It may be that we interpret utterances as representations of states of affairs in the base world unless we are led, by, for example, the semantics of a particular linguistic expression, to do otherwise (i.e., to interpret the utterance as a representation of a state of affairs in a specific type of world or as a representation of another representation). For the purposes of this thesis, however, I will assume that declaratives encode the information that the proposition they express is entertained as a description of a state of affairs in the base world.

1.4.3. Mood indicators and procedural meaning

I said earlier that the information encoded by mood indicators is seen within relevance theory as procedural meaning contributing to the higher level explicatures of an utterance. For example, an imperative instructs the hearer to construct a higher level explicature involving a particular type of attitude: the attitude that the described state of affairs is regarded as potential and desirable. What are the arguments in favour of the claim that the information encoded by mood indicators, and in particular the preverbal particle *na*, is procedural? The arguments I will put forward here are suggested in Wilson (1992). The discussion will focus on *na*-clauses.

The first consideration is that the meanings of mood indicators are somehow not accessible to consciousness in the way that the meanings of the words that encode conceptual meanings are (eg. *house*, *desk*, *shop*, etc). It is worth noting that this seems to be typical of most of the words which have been argued to encode procedural meaning (Blakemore 1987, Blass 1990, Wilson and Sperber 1993, Wilson 1991b, 1992). Now, it is quite generally true that computations cannot be brought to consciousness: for example, we don't have conscious access to move- α or phonological rules. So, the difficulty in accessing the meaning of *na*- or non *na*-clauses would be explained by the assumption that the information they encode is procedural, i.e. concerns the manipulation of conceptual representations and contributes to the inferential phase of utterance interpretation.

The next argument comes from embedded *na*-clauses. If the information encoded by *na*-clauses was conceptual, then the sentences in (84) would be assigned by the grammar the (incomplete) semantic representations in (85):

- (84) a. To *na* spoudasi tha itan kalo gia tin Maria
the *na* study-3s-PF will was good for the Mary
To study would be good for Mary
- b. I Maria elpizi/theli *na* doulepsi
The Mary hope-3s/want-3s *na* work-3s-PF
Mary hopes/wants to work

c. O Petros skopevi/prospathise na metakomisi
 the Peter plan-3s/tried-3s na move-3s-PF
 Peter is planning/tried to move

d. O Kostas ine etimos na ta thisiasi ola
 The Kostas is ready na them sacrifice-3s-PF everything
 Kostas is ready to sacrifice everything

- (85) a. For it to be possible for Mary to study would be good for Mary
 b. Mary wants it to be possible for her to work
 c. *Peter is planing/tried for it to be possible for him to move
 d. *Kostas is ready for it to be possible for him to sacrifice everything

However, the semantic representations in (85), when possible at all, are too weak. In (84a), for example, the speaker is not saying that it would be good for Mary to be able to study, but that it would be good for Mary to study. In (84b) the speaker is not saying that Mary hopes or wants to be able to work but rather that she hopes/wants to work. This problem will not arise if the information encoded by *na* is taken to be procedural, since on this view *na*-clauses do not encode elements of conceptual representations.

The same point holds with respect to the subordinate *na*-clauses in (86):

- (86) a. O Janis irthe stin Athina jia na spoudasi
 the John came to Athens in order na study-3s-PF
 John came to Athens in order to study
- b. Mehri na vri doulia, tha danizete hrimata
 Until na find-3s job, will borrow-3s money
 Until he finds a job, he will be borrowing money
- c. O Janis theli ena aftokinito pou na ine grigoro
 The John want-3s a car that na is fast
 John wants a car which would be fast

Once again, if we took the information encoded by *na* to be conceptual, then the semantic representations assigned to these sentences would be too weak. In (86a) the speaker is not saying that John came to Athens in order for him to be able to study, but that he came to Athens in order to study. In (86b) the speaker is not saying that he will be borrowing money until it is possible for him to find a job, but that he will be borrowing money until he finds a job. In (86c) the speaker is not saying that John wants a car for which it is possible to be fast, but rather that he wants a car which is fast. This problem will not arise if we treat the information encoded by *na* as procedural.

The third argument hinges on the observation that not all mood indicators in a sentence may point in the same direction. Consider the following dialogue:

- (87) Peter: Na min tis ksanamilisis
na not hers again speak-2s-PF
You should never speak to her again
Mary: Na min tis ksanamiliso?
na not hers again speak-1s-PF
I should never speak to her again?

As I will argue in chapter 3, section 3.6.4, Mary's utterance is a declarative *na*-clause. It is not, however, uttered, with the falling intonation typical of declarative utterances but rather with a low rise towards the end, which makes it more similar to an interrogative. Now, because of the declarative syntactic structure and the *na*-verb form Mary's utterance should be understood as describing a state of affairs in a possible world. On the other hand, according to the interrogative-like intonation, it should be interpreted as a representation of a relevant thought, i.e. as a question, or at least as expressing some doubt about the truth of the proposition expressed. Now, if we were to assume that the information encoded by the mood indicators in this utterance is conceptual, i.e. appearing in the semantic representation of the utterance, then the result should be a contradiction. However, Mary's utterance in (87) does not sound contradictory or odd. By treating the meaning of mood indicators as procedural, i.e. as simply pointing in certain directions, we can allow for it to be integrated in a non-contradictory whole.

Another argument comes from Wilson (1991b). It is argued there that illocutionary adverbials like *frankly* encode concepts which are integrated in a higher level explicature, the other elements of which are pragmatically inferred. So, for example (88a) gives rise to the higher level explicature in (88b):

- (88) a. Frankly, the roof's condition is less than good
b. I am telling you frankly that the roof's condition is less than good

Now, in at least some cases, the speaker who utters a sentence like (88a) can lay herself open to charges of untruthfulness. For example,

- (89) Mary: Frankly, the roof's condition is less than good
Peter: That's not true. You're not being frank
(adapted from Wilson 1991b:12)

This is not surprising if *frankly* is an element of a conceptual representation which may be true or false in its own right.

Now, a speaker using a *na*-clause does not lay herself open to similar charges of untruthfulness. Consider:

- (90) Peter (musing): Na agoraso ena spiti
na buy-1s a house
To buy a house
Mary: ?That's not true. It's not possible for you to buy a house

The oddity of this exchange cannot be explained if we were to assume that *na* encodes the concept "it is possible that...", which in main clause cases gives rise to the corresponding higher level explicature. By treating the information encoded by *na* procedurally we don't face this problem. On this view, *na* does not encode an element of the conceptual higher level representation but only some information on how to construct one.

It should be clear by now that the relevance theoretic analysis of mood indicators is very different from the performative hypothesis. If this account were couched in conceptual terms, it would be a variant of the performative hypothesis.

However, as I have shown, there are plenty of arguments suggesting that, for example, *na* does not conceptually encode the higher level explicature "It is possible that ...". The information encoded by mood indicators in general is procedural, i.e. they provide the hearer with a set of hints for constructing the intended higher level explicature.

Finally, let me explain how I conceive of procedural encoding in the case of *na*-clauses. Note, first, that it is utterances, rather than sentences or clauses, which carry higher level explicatures. It follows that *na* will guide the hearer to construct a particular type of higher level explicatures only in the case of independent *na*-clauses. So, how does *na* contribute to the interpretation process in the case of embedded *na*-clauses? Some suggestions have been put forward by Wilson (1992) in connection with the infinitive in English, and I will draw directly on her observations. Consider the example in (91):

- (91) I Maria theli/elpizi na taksidepsi sto eksoteriko
 The Maria want-3s/hope-3s na travel abroad
 Maria wants/hopes to travel abroad

Using the *na*-clause in (91) the speaker activates, makes more accessible the information in (92):

- (92) It is possible for Mary to travel abroad

Of course, processing (91) from left to right, the hearer will recover something much stronger as a result of decoding the meanings of the verbs "want" or "hope": that is, that it is desirable and potential for Mary to travel abroad. In this case, the hearer will not pay any attention to the information encoded by *na*. The same happens with examples such as the following:

- (93) a. Ine aparetito/pithano/dinato/bori/prepi na taksidepsi sto eksoteriko i Maria
 is necessary/possible/potential/can-3s/must-3s na travel-3s-PF abroad the
 Mary
 It is necessary/possible/potential for Mary to travel abroad/
 Mary can/may/must travel abroad

- b. I Maria sinehizi/anagastike na frontizi ti gia mitera tis
 The Mary continue-3s/was forced-3s na take care-3s-IPF the old mother
 her
 Mary continues/was forced to take care of her old mother

In (93a) the main verb encodes possibility or necessity, and in (93b) the main verb entails that the state of affairs described in the complement clause is actual. In both cases the information encoded by *na* is, so to speak, "absorbed", into the information encoded by the main verb.

However, with verbs which may take either a *na*- or a non *na*-complement the information encoded by *na* plays a more active role:

- (94) a. Leo/nomizo oti tha pame
 say/think-1s that will go-1pl
 I say/think that we will go
- b. Leo/nomizo na pame
 say/think-1s na go-1pl
 I say/think that we should go

In such cases the use of the *na*-clause makes, again, a certain attitude more accessible. However, the particular attitude the hearer is intended to recover has to be inferred rather than decoded from material elsewhere in the sentence as in the previous examples.

In the case of independent *na*-clauses, the information encoded by *na* contributes to the construction of a particular higher level explicature. Consider, for example, (95):

- (95) a. O Janis na ine to poli-poli ikosi hronon
 The John na is the most twenty years
 John may be at most twenty years old

- b. *Na figis amesos*
na leave-2s-PF immediately
 Leave/You should leave immediately

Na in these examples activates, makes more accessible the information in (96):

- (96) a. It is possible that John is at most twenty years old
 b. It is possible that you leave immediately

which will encourage the hearer to construct in each case a higher level explicature involving possibility. The precise attitude of the speaker, whether she considers the described state of affairs possible, as in (95a), or wants it, as in (95b), will be decided on the basis of the context and considerations of optimal relevance, as I will show in detail in the next chapter.

1.5. Summary

After arguing that earlier analyses of the subjunctive are not suitable for *na*-clauses in MG and that existing analyses of *na*-clauses are inadequate, I have put forward, in this chapter, the hypothesis which is going to be explored and defended in the rest of this thesis, as well as aspects of the framework on which it is built. I argued that the preverbal particle *na* encodes non-truth-conditional meaning which relates to propositional attitude information. In particular, *na*-clauses indicate that the state of affairs described is regarded as truth-evaluable in a possible world. In contrast non *na*-clauses indicate that the described state of affairs is truth-evaluable in the base world (which, in the default case, is the actual world). I have also argued that the information encoded by *na* is procedural rather than conceptual: it does not contribute a constituent to a conceptual representation communicated by the utterance. Rather, in the case of independent *na*-clauses, it guides the hearer towards constructing a higher level explicature containing the propositional attitude of possibility. In the case of embedded *na*-clauses, *na* also makes accessible the information that the described state of affairs is possible, but does not give rise to a higher level explicature. This propositional attitude information may be

independently encoded by material elsewhere in the sentence (for example in the main verb), or it may have to be pragmatically confirmed. In the next two chapters I will show that assuming this semantics and adopting an adequate pragmatic theory we can provide a psychologically plausible explanation of the various interpretations of independent *na*-clauses (and the way they differ from the corresponding non *na*-clauses).

CHAPTER 2

ON THE INTERPRETATION OF *na*-CLAUSES: *na*-CLAUSES AND ENRICHMENT

2.1. Introduction

In chapter 1 I proposed a univocal semantics for *na*. I argued that *na* encodes procedural information about propositional attitude which does not contribute to the truth conditions of the utterance. In particular, I argued that *na*-clauses encode the information that the proposition they express is entertained as a description of a state of affairs in a possible world. Now, I showed in the first chapter that independent *na*-clauses may be interpreted in several ways: they may be used to grant permission, issue a command, give advice, express wishes, express surprise, uncertainty, etc. The question that arises and that I am going to address in this chapter is how these various interpretations may be reconciled with the proposed semantics of *na*-clauses. I suggested in the last chapter that these interpretations are arrived at pragmatically, i.e. via some inference process which is constrained by some general communicative principle(s) and which takes as input the semantic representation of the utterance and the context and yields as output the intended interpretation. The pragmatic theory I will use is relevance theory. In this chapter I will outline the basic tenets of relevance theory and proceed to show how we can account for the interpretations independent *na*-clauses are amenable to. The discussion will focus on *na*-clauses which function like imperatives, *na*-clauses with hortative- and optative-like interpretations and *na*-clauses expressing potentiality and possibility.

2.2. Interpreting utterances

2.2.1. Relevance Theory

In this section I will give a brief outline of relevance theory. (For detailed presentation see Sperber and Wilson 1986, 1987; Blakemore 1992; and Wilson to

appear a, on which I draw in this section; for critical discussion see Levinson 1989, Mey and Talbot 1988, Hirst, Leslie and Walker 1989, Chametzky 1992 and Open Peer Commentary in Sperber and Wilson 1987). In the remainder of this chapter and the next one I will argue that a psychologically plausible explanation of the way *na*-clauses are interpreted is possible within this framework of utterance interpretation.

Sperber and Wilson's relevance theory is in the Gricean tradition in that they view utterance interpretation as an essentially inferential process. Understanding an utterance means deciding among its possible interpretations which was the one the speaker intended to communicate. The possible interpretations of an utterance are determined on the basis of its linguistically encoded content and the contextual assumptions that are brought to bear. Interpreting utterances, for both Sperber and Wilson and Grice, involves non-demonstrative inference: the hearer forms a hypothesis about the speaker's intended interpretation which is then evaluated on the basis of general communicative principles.

In contrast to Griceans, however, Sperber and Wilson do not believe that utterance interpretation is rule- or maxim-governed. They claim that a general criterion for evaluating possible interpretations is part and parcel of the human makeup. Moreover, this criterion is powerful enough to exclude all but a single interpretation. Having found an interpretation which satisfies this criterion the hearer need not look further; he will take this interpretation as the one the speaker intended to communicate.

As a theory of utterance interpretation, relevance theory is based on a generalisation about human cognition. In general, we pay attention to information that seems relevant to us. An utterance is one of those stimuli which preempt our attention. Because it is a request for attention, an utterance creates an expectation of relevance. Sperber and Wilson call this fact the principle of relevance:

Principle of relevance

Every utterance communicates the presumption of its own optimal relevance.

The term optimal relevance is meant to capture the level of relevance that would justify the fact that our attention has been asked for. Sperber and Wilson's criterion of utterance interpretation is built around this level. Optimal relevance is defined as follows:

Optimal relevance

An utterance on a given interpretation is optimally relevant if and only if:

- (a) it achieves enough contextual effects to be worth the hearer's attention;
- (b) it puts the hearer to no unjustifiable effort in achieving those effects

As I said earlier, the task of any theory of utterance interpretation is to explain how a hearer arrives at the intended interpretation. The term interpretation is used here in a fairly broad sense to cover the recovery of what the speaker intended to say, what she intended to imply, her intended attitude towards what was said and implied, and the intended context.

Consider an exchange like (1):

- (1) A: Will you have good memories of this year's Christmas party?
 B: Well, everyone had a bug and I developed a fever the next day

As I argued in chapter 1, section 1.4.1, recovering what the speaker intended to say is not a simple matter of decoding her words. B's linguistic knowledge will tell him that *bug* has at least three senses, and that *everyone* is one of those expressions which range over some universe of discourse, and that *I* and *the next day* pick out a particular individual and a particular time span respectively. To recover what B intended to say, however, A has to access the intended meaning of the ambiguous word *bug*, to fix the domain over which *everyone* was intended to quantify, to assign the intended reference to the referential expressions *I* and *the next day* and to determine the intended relation, if any, between the first and the second conjunct in B's utterance. As I argued earlier, these tasks are inferential, i.e. they depend on the context of utterance, and therefore fall within the domain of pragmatics.

The "preferred" interpretation of what B said in (1) is that everyone attending the Christmas party A referred to had a cold and as a result B developed a fever the day following the day on which the Christmas party took place. Notice, however, that this is not the only possible interpretation. Another possible interpretation, i.e. an interpretation compatible with the linguistically encoded content of the utterance, is that B is describing here the following two events: that everyone in the building where the Christmas party was held had a hidden microphone and that the next day B developed a fever; or that everyone in the town where the building is, in which the Christmas party was held, owned an insect and that the next day B developed a fever, etc. A theory of utterance interpretation should be capable of explaining how the right, i.e. the intended, proposition expressed is recovered and why no other interpretation compatible with the linguistically encoded content of the utterance is selected. It is one of the main concerns of this thesis to show how, with respect to *na*-clauses in MG, relevance theory explains the construction of what the speaker intended to say.

Clearly, recovering the proposition expressed by an utterance does not exhaust the process of understanding an utterance. However, if the hearer does not recover what the speaker intended to communicate explicitly, the chances are he will not be able to recover what the speaker intended to communicate implicitly. On the assumption that spending an evening with people who are ill and getting ill yourself as a result is not a very pleasant thing to happen, B will be understood as implicating that she will not have good memories of this year's Christmas party. B is thereby answering A's question. However, if this is all B intended to communicate, why didn't she say "No, I will not have good memories of this year's Christmas party"? Intuitively, the answer is clear. The speaker did not simply intend to give a yes/no answer; she wanted to explain why her memories will not be as positive as expected.¹ We would expect an adequate theory of utterance

¹Sperber and Wilson (1986) distinguish between implicated premises and implicated conclusions. With respect to the example in (1) the speaker has implicated both (i) and (ii):

- (i) If everyone at the last Christmas party you attended was ill and as a result you got ill yourself, you will not have good memories of that party
- (ii) The speaker will not have good memories of the last Christmas party

(i) is the implicated premise and (ii) the implicated conclusion. Implicated premises may be recovered from memory or constructed on the spot. Once the implicated

interpretation to provide an account of how implicatures come about and why speakers often choose to be indirect.

Notice that the assumption that B will not have good memories is a strong implicature of her utterance: A could hardly fail to derive it. If A had missed it, then communication would have failed. However, utterances do not always give rise to strong implicatures; some utterances may yield a wider range of weak implicatures. For example, suppose we are looking at Donatello's Maddalena and I utter (2):

(2) I am so moved

In this case I am simply encouraging you to think of the way I feel about art and in particular sculpture, the way I feel about Maddalena (the statue and the person), my admiration of Donatello, etc. I am not, however, committed to any single definitive interpretation nor is the recovery of any particular implicature essential to the understanding of my utterance. I am simply communicating my impression.

Let's return to the exchange in (1). To understand B's utterance, it is essential that A recovers B's intended attitude towards what she is saying and implicating. Provided that the hearer trusts the speaker he will in this case infer that the speaker believes, i.e. is committed to the truth of, what she says and implicates. Given more contextual assumptions like, for example, that B treasures Christmas parties, A may infer that B regrets that everyone had a cold and that she developed a fever. In this context the hearer may also infer that the speaker regrets that she has no good memories from this last party. Speakers, however, do not always endorse the assumptions conveyed by their utterances. For example, suppose I find out that our new book keeper has not updated his records since last month. In this context I utter:

(3) He is really efficient

In this case it is clear that I do not believe what I say; rather I am being ironical. It is an essential aspect of utterance understanding that the hearer decides

premise has been accessed, the implicated conclusion follows by a straightforward deductive rule taking the implicated premise and the explicature of the utterance as input.

whether the speaker endorses or dissociates herself from the propositions explicitly and implicitly expressed by her utterance and whether she is asserting them to be true or wondering whether they are true or hoping they will become true, etc.

Linguistic devices, such as illocutionary and attitudinal adverbs and particles, particular word order or verb form, help the hearer recover the speaker's intended attitude towards the proposition expressed:

- (4) a. Regrettably, Henry stayed over for the weekend
- b. George is punctual, huh!
- c. Open the door

As I have argued in chapter 1 and will discuss in more detail later on, *na*- and non *na*-clauses convey meaning which concerns propositional attitude.

It is obvious from the discussion so far that the questions we have been considering, i.e. what did the speaker intend to say, what did the speaker intend to imply and what was the speaker's intended attitude towards what she said and implied, cannot be answered if we don't know the intended context of utterance. To recover the intended interpretation the hearer has to construct and use the intended context. It is in this sense that the question in (d), "What was the intended context", is, as Wilson (to appear, a: 7) says, "the most fundamental question of all".

So, how does the definition of optimal relevance help us in answering the questions raised in the previous paragraphs? Optimal relevance is defined in terms of contextual effects and processing effort. On the effect side the hearer expects that the utterance has an interpretation which is worth her attending to. In other words, the hearer expects to be offered information which is more relevant to her than any other piece of information would be in the given situation. On the effort side the hearer expects to be able to access this information without having to put in disproportionate amounts of effort.

According to Sperber and Wilson, there are three types of contextual effects, i.e. three ways in which the information presented in an utterance may combine with already available information: it may strengthen an already existing assumption, contradict and eliminate an already existing assumption or combine with an already existing assumption to yield a contextual implication, i.e. a logical

implication which is not derivable from either the new or the old information alone. Let us consider the following opening utterance in a course on computers:

(5) It is very easy to use a PC

Suppose that, judging from the number of people who use a PC today, you already suspected that it was very easy to use one. In this context, assuming further that you trust the speaker, (5) will achieve relevance by strengthening this old assumption of yours. Suppose instead now that, on the basis of the number of magazines on PCs one sees these days at every newsagent, you had concluded that it must be difficult to use a PC. Assuming that you recognise an expert in the face of the speaker and therefore trust her completely, (5) will achieve relevance by contradicting and eliminating your existing assumption. Finally, suppose you have been given a PC at work but you have decided you will only use it if it is easy to do so. Then, assuming you trust the speaker, (5) will achieve relevance by giving rise to the contextual implication that you will use the PC.

The more effects an utterance has the more relevant it is. However, contextual effects do not come free: they cost mental effort. The greater the effort required in deriving those effects the lower the relevance. Processing effort is consumed in constructing a suitable context in which to process the utterance. The easier it is to construct a context, the less processing effort is required and therefore, other things being equal, the more relevant the utterance. For example, (5) will seem more relevant to you if you already have plans to learn how to use a PC. It will be easier for you then to think up a context in which (5) might achieve some contextual effects. If, however, you never had any such plans, it will be more difficult, though not impossible, for you to construct a context in which to process (5). More effort will be required and therefore, other things being equal, (5) will be less relevant.

Moreover, processing effort is caused by the psychological complexity of the utterance itself. The psychological complexity of an utterance is a function of its linguistic complexity and the frequency of use of its elements. For example, compare (5) above with (6):

(6) It is very easy to use a PC and IBM is a big company

Suppose the speaker utters (6), instead of (5), with the intention to strengthen the hearer's assumption that it is easy to use a PC. Suppose further that in this context there is no reason to remind the hearer that IBM is a big company. In this situation (6) will yield the desired effect but, because of its structural complexity, it will require more processing effort than (5) to do so. So, the linguistically more complex (6) will require more effort without giving rise to any extra effects and would therefore be less relevant.

Notice that the hypothetical scenario where the speaker utters (6) with the intention to communicate exactly what she would have communicated with (5) strikes us as very odd (on the assumption that the speaker knows that she could have achieved the same effects uttering (5)). If the speaker chooses to utter (6) we naturally assume that she intends to communicate something more or something different than she would have communicated uttering (5). We are talking here about overt communication, i.e. about situations where the speaker intends to convey a message, actively helps the hearer to recover it, and would acknowledge it if asked. So, we expect that in processing the second part of (6) we will derive certain effects, and it is difficult even to imagine a situation where (6) would be uttered instead of (5) and no further or different effects would be intended. In other words, we expect a linguistically more complex utterance to give rise to extra or different effects in comparison to a linguistically simpler utterance. This, a direct consequence of the principle of relevance, will be crucial in the interpretation of *na*- and non *na*-clauses.

The other factor that determines the psychological complexity of an utterance is the frequency of use of its elements. Compare (7) and (8):

(7) Salt and pepper are already on the table

(8) Condiments are already on the table

Stylistically (7) is felt in many contexts to be more appropriate than (8). This is because (8) contains the rare word *condiments* and therefore causes the hearer more processing effort, than the familiar, although linguistically more complex, *salt and pepper*. Once again, if the speaker chooses to utter (8) instead of (7), she will

be taken to have intended additional effects; for example, she might have intended to communicate that he is better educated than most people, etc.

Clause (b) of the definition of optimal relevance plays a decisive role in determining which interpretation the hearer recovers. An utterance may achieve enough effects to be worth the hearer's listening to on more than one interpretations. For example, going back to the exchange in (1), both the interpretation on which everyone in the party had a virus and as a result the speaker fell ill, and the interpretation on which two facts are stated: everyone in the town owns an insect and the next day the speaker fell ill, are interesting enough to be worth the hearer's attention. However, only one of them satisfies both clause (a) and, crucially, clause (b) of the definition of optimal relevance. In the context set up by A's question and given typical general knowledge assumptions about winter, people falling ill, etc., the interpretation on which everyone in the party attended by the speaker was ill with the flu and as a result she got it too, requires less processing effort. It is, therefore, the first one that occurs to the hearer and achieves enough effects to make its processing worth while. Therefore, it is the one the hearer should choose. With regard to the speaker, on the other hand, it follows from clause (b) of the definition of optimal relevance that she should formulate ^{her} utterance in such a way that the first interpretation that will occur to the hearer, as far as she can foresee, is the one she intended to communicate.

However, optimal relevance is not the criterion that Sperber and Wilson propose. The criterion they actually propose is rather weaker. The reason is that an utterance does not have to be optimally relevant. Suppose, for example, that I see you in the refectory and I tell you that the two o'clock lecture has been cancelled. As it turns out, you already know this. In this case my utterance is not optimally relevant; it is however both acceptable and comprehensible. To account for cases like this one, the actual criterion that Sperber and Wilson propose is a criterion of consistency with the principle of relevance:

Criterion of consistency with the principle of relevance

An utterance, on a given interpretation, is consistent with the principle of relevance if and only if the speaker might rationally have expected it to be optimally relevant to the hearer on that interpretation.

This is the criterion that hearers actually employ in utterance interpretation. The first interpretation tested and found consistent with the principle of relevance is the only interpretation consistent with the principle of relevance.

In conclusion, the criterion of consistency with the principle of relevance is strong enough to exclude all but a single interpretation, it explains how utterance interpretation is achieved but also why it may fail; moreover, it does justice to the fact that hearers do not go on expanding the context looking for even richer or different interpretations. According to Wilson (to appear, a: 16), it follows from the criterion of ^{consistency}consistency, with the principle of relevance that:

"... all the hearer is entitled to impute as part of the intended interpretation is the *minimal* (i.e. smallest, most accessible) context and contextual effects that would be enough to make the utterance worth his attention. Thus, the interpretation process has an inbuilt stopping place."

2.2.2. Relevance and explicatures

I argued in chapter 1, section 1.4.1., that the proposition expressed by an utterance and its higher level explicatures are recovered by a combination of linguistic decoding and inference. I also pointed out that contrary to assumptions made in Gricean pragmatics the inferential processes at this level, i.e. the bridging of the gap between the incomplete semantic representation encoded by an utterance and the propositions it explicitly communicates, are as much driven by general communicative principles as are those involved in the recovery of implicatures. In this section I want to argue that relevance theory offers a psychologically plausible explanation of how the explicitly communicated content of an utterance is obtained.

Consider again the exchange in (1):

- (1) A: Will you have good memories of this year's Christmas party?
B: Well, everyone had a bug and I developed a fever the next day

B is understood as having said that everyone attending the Christmas party mentioned by A was ill and that as a result she developed a fever the day after the party. The other linguistically possible interpretations, like for example that everyone in the building where this party was held owned an insect (or was carrying a hidden microphone) and that the speaker fell ill the next day, are not consciously considered. We want our theory of utterance interpretation to tell us why this is so.

Disambiguation was mentioned in chapter 1 as one of the inferential tasks the hearer typically has to perform in order to recover the proposition expressed. In the case of the ambiguous word *bug* in B's utterance, the sense "illness" will be selected. The mention of Christmas makes accessible assumptions about it being cold around that time of the year and people falling ill, thereby encouraging the selection of this particular sense. So, the least costly hypothesis the hearer could form is that by *bug* the speaker intended to communicate "illness". This hypothesis must also be checked on the effect side. Does it contribute to the overall interpretation in such a way that this interpretation is consistent with the principle of relevance? It clearly does so. Therefore, the hearer will not go on to consider the other linguistically encoded meanings of the word *bug*.²

Reference assignment is another of the inferential tasks that hearers typically perform in order to recover what the speaker intended to communicate explicitly. Recent work in the semantics of pronouns (Kaplan 1989, Kempson 1988, forthcoming, Wilson and Sperber 1993) has suggested that pronouns do not

²It is worth mentioning here that disambiguation is broadly discussed in the psycholinguistic literature (Swinney 1979, Tanenhaus and Lucas 1986, Marslen-Wilson and Tyler 1981). The issues discussed there have to do with whether all the senses of an ambiguous word are activated independently of context or whether the context somehow affects the range of activated senses, whether disambiguation takes place at the end of the ambiguous word, or of the clause containing it or of the whole utterance, etc. The point not addressed by such studies and which is successfully addressed within relevance theory is what makes a particular interpretation correct.

encode concepts but procedures. So, for example, the pronoun *I* in B's utterance might linguistically encode the instruction to identify the speaker as the referent. There is always only one possible referent for *I*, determined by the situation of utterance. Consider also the deictic expression *the next day*. The most accessible interpretation that contributes towards the overall relevance of the utterance is that by *the next day* the speaker intended to pick out the day following the day of the Christmas party. However, the intended referent of a linguistic expression is not always so easy to pin down. For example, consider (9):

(9) The famous rock star appeared on stage very late

Suppose I utter (9) in the course of telling you about Sting's last concert. You are most likely to understand *the famous rock star* as referring to Sting. However, in principle there are many possible referents for the definite description *the famous rock star*: Prince, Michael Jackson, Sting, etc. Each of the propositions "Prince appeared on stage very late", "M.Jackson appeared on stage very late" and "Sting appeared on stage very late" is worth considering on the effect side (with the last one perhaps causing fewer effects than the other two). However, the most salient referent is Sting and, therefore, the interpretation involving Sting will be constructed with the least effort. Moreover, in this context this interpretation will achieve enough contextual effects to satisfy the hearer's expectation of optimal relevance. It might, for example, contradict and eliminate the hearer's existing assumption that Sting always comes on the stage as soon as the concert begins or it might yield the contextual implication that the concert was boring until quite late, etc. So, this is an interpretation a rational speaker could have intended and is therefore the interpretation the speaker should have intended. It follows that the hearer does not need to consider any other possible referents. This account offers a psychologically plausible explanation of why hearers assign reference in the way they do.

Reference assignment and the way it is accounted for within relevance theory is discussed in detail in Wilson (to appear, b); (for an introduction see Blakemore 1992: 65-77). In (9) the definite description *the famous rock star* is interpreted referentially, i.e. it is intended to pick out a particular individual, in the context considered above. Notice, however, that definite descriptions are not always interpreted in this way. So, for example, in (10)

(10) The shortest man on earth may suffer from an inferiority complex

the definite description *the shortest man on earth* is most likely to be understood attributively: the shortest man on earth, whoever he is, may suffer from an inferiority complex. Indefinite descriptions may also be interpreted either referentially or attributively. We have here another indeterminacy which must be resolved pragmatically. The way definite and indefinite descriptions are interpreted will be discussed in great detail in chapter 4.

The hearer's search for optimal relevance is responsible not only for the way disambiguation and reference assignment take place, but also for the fact that the hearer in (1) will probably infer that there is a causal connection between the two conjuncts in B's utterance: everyone at the party had a bug and as a result the speaker developed a fever the next day. I pointed out in chapter 1 that the logical form of an utterance not only undergoes reference assignment and disambiguation, but also forms the input to a much broader inferential process of filling in slots or resolving vaguenesses, usually referred to within relevance theory as **enrichment**. This pragmatic process is also guided by considerations of optimal relevance, as I will now show.

Sometimes such slots are provided by the grammar. For example consider (11):

- (11) A: Where did you put the tent?
B: In the attic

The hearer will take B to have explicitly communicated the proposition "B put the tent in the attic". It can be argued that this completion of B's elliptical utterance is made necessary by the syntactic properties of the recovered representation:

$$s[_{NP}[e] \text{ } _{VP}[\text{ } _{V}[e] \text{ } _{PP}[\text{in the attic}]]]$$

Obviously, it is left to a pragmatic theory to explain why the hearer recovers this explicature rather than, for example, "My grandmother's chair is in the attic". Within relevance theory we would say that in the context of A's question the assumption "B put the tent in the attic" is the first and therefore the only interpretation which satisfies the criterion of consistency with the principle of relevance: it achieves

enough effects (for example, it answers A's question) without putting the hearer to unjustifiable effort in deriving them.

Even more interestingly, there are cases where the logical form of an utterance does not include any variables instructing further filling in and yet hearers take an enriched version of that representation to be the proposition explicitly communicated by the utterance. For example, consider (12):

- (12) A: If I'm at your place at 12.10, we'll be at the British Museum at 12.15
B: It will take us some time to get to the British Museum, you know

B is here understood as having said that it will take them more time than A estimates to get to the British Museum. The linguistically encoded content of B's utterance "it will take us a certain time span to get to the British museum" highly underdetermines the intended interpretation. This representation, which is trivially true, will not be preferred by the hearer because, although it is the easiest one to access, it does not have any effects and therefore could not possibly justify the speaker's call for the hearer's attention. The next easiest assumption in the context of A's question, i.e. that they will need more time than A thinks, obviously achieves an adequate range of effects that the speaker could manifestly have foreseen. For example, it may combine with other assumptions to yield the contextual implication that A and B should meet earlier. This interpretation satisfies both clauses of the definition of optimal relevance and is an interpretation the speaker could have intended. It follows that this is the interpretation the hearer will choose.

Conjoined utterances are another case where enrichment of the encoded content may take place. Consider the utterances in (13):

- (13) a. Paris is the capital of France and Athens is the capital of Greece
b. Jane picked up a pen and made a note
c. The road was icy and Peter slipped
d. We were repairing the fence and discovered that the wood had rotted
e. The window was left open and a bird flew in

And is assumed to be semantically equivalent to the truth-functional logical operator $\&$.³ (13a) is an example of symmetric conjunction, i.e. the natural language connective *and* functions in exactly the same way as the logical operator $\&$. However, conjoined utterances, for example the ones in (13b-e), often convey temporal, causal or other types of suggestions. Processing (13b) the hearer will infer that there is a temporal sequence relation between the events described in the two conjuncts: Jane first picked up the pen and then she made a note. In (13c) the hearer will infer that Peter slipped because the road was icy. In (13d) the suggestion is that we discovered that the wood had rotted in the process of repairing the fence. In (13e) the open window enabled the bird to fly in the house.

Within the Gricean framework the temporal suggestion carried by some conjoined sentences could be accounted for as an implicature generated via the manner submaxim "Be orderly". However, Carston (1988, 1993a) has argued convincingly against the implicature analysis. She argues that such suggestions are best accounted for as pragmatically determined aspects of the truth conditional content of the utterance. One of her arguments is that the explicature analysis solves the problem noted by Cohen (1971) that the temporal and causal connotations carried by conjoined utterances fall under the scope of logical operators, which should not be possible if they are conversational implicatures. Consider:

- (14) a. If the old king died from a heart attack and a republic was declared Sam will be happy, but if a republic was declared and the old king died from a heart attack Sam will be unhappy.

(Carston 1988:172; adapted from Cohen 1971)

- b. It's better to meet the love of your life and get married than to get married and meet the love of your life

(Carston 1988:172)

³An alternative view is put forward by Cohen (1971), who argues that *and* has a multi-featured single sense. For arguments against this view see Posner (1980) and Carston (1988, 1993a).

- (15) Either she became an alcoholic and her husband left her or he left her and she became an alcoholic; I'm not sure which.

(Carston 1988:173)

If the temporal and causal connotations were implicatures, then (14a) and (14b) should be contradictory and (15) redundant. But there is nothing odd with any of these utterances. It follows that these suggestions cannot be treated as implicatures, since, according to Grice, implicatures do not contribute to the truth-conditional content of the utterance. If, however, they are regarded as pragmatically determined aspects of the explicitly communicated content of the utterance, then this problem would not arise. On the contrary, the explicature account predicts that these suggestions fall under the scope of logical operators.

What is of greater interest to me here is that the enrichment of the semantics of *and* is subject to relevance considerations. Let me consider (13b). The explicature the hearer will typically recover is "She picked up a pen and then made a note with the pen". This interpretation is the most accessible one. We all have a mental script about picking up pens and writing down something, perhaps as part of a broader script concerning taking objects in our hands and performing actions with them, which will be activated when we process (13b). Having found an interpretation consistent with the principle of relevance, the hearer need not look any further. So, for example the logically possible expansion of the linguistic content "She picked up a pen and at the same time made a note with a pencil" will not be considered because although it is likely to achieve more or different effects it fails the definition of optimal relevance on the effort side.

In addition to the proposition expressed by an utterance, the pragmatic process of enrichment is often crucial to the derivation of the higher level explicatures of the utterance. In chapter 1 I presented the Wilson and Sperber account of the semantics of imperatives. Imperative syntax encodes propositional attitude information: the proposition expressed is entertained as a description of a state of affairs in a desirable and potential world. As they point out, however, a statement of desirability is a three place relation and needs to be further specified: someone regards a state of affairs as desirable to someone. The enrichment of "desirable" follows considerations of relevance. Let's consider again the example I used in 1.4.2. Henry has been complaining that it is too hot in this room and has

let you know that he would like to turn off the heating. You have been ignoring him so far, but in the end you say:

(16) Ok. Turn down the heating

Decoding the utterance, the hearer will recover the information that the world in which he turns down the heating is desirable and potential. However, this is not all. In this context the first hypothesis to come to the hearer's mind is that the described state of affairs is considered by the speaker to be desirable to him (the hearer) to a high degree and that this state of affairs is potential as far as the speaker is concerned. Moreover, this interpretation achieves enough effects to be worth Henry's attention: Henry may now turn down the heating, he may conclude that the speaker is warm enough, that the speaker gave in because she was fed up with him, etc. This interpretation achieves enough effects which the speaker could manifestly have foreseen, without putting the hearer to unjustified effort in recovering them. Therefore, it is the interpretation the hearer should choose. As we will see in the next sections, enriching the semantic content of *na*-clauses in accordance with considerations of optimal relevance is often crucial to the interpretation of such clauses.

2.3. Pragmatically enriching the semantics of *na*-clauses

2.3.1. Declarative and interrogative *na*-clauses

According to Sperber and Wilson (1988a), the various syntactic structures, i.e. declarative, interrogative, imperative, encode procedural information concerning propositional attitude. Declaratives encode the information that the proposition expressed is entertained as a description of a state of affairs in the actual or some possible world. Interrogatives encode the information that the proposition expressed is entertained as a representation of a relevant thought. I proposed in chapter 1 that *na*-clauses also encode information about propositional attitude: the proposition expressed by a *na*-clause is entertained as a description of a state of affairs in a possible world. I will show in the remainder of this chapter that this

propositional attitude specification interacts with the propositional attitude encoded by declarative syntax. In the next chapter I will show that the propositional attitude information encoded by *na*-clauses may also interact with the propositional attitude encoded by interrogative syntax. Let me, however, first establish that *na*-clauses may be either declarative or interrogative.

Note that, although I will be arguing for the existence of *na*- and non *na*-declaratives and interrogatives, there are no indicative and/or subjunctive imperatives in MG. The imperative in MG is a distinct morphological and syntactic category.⁴

According to recent work in syntax (Philippaki-Warbuton 1985, 1992, Tsimpli 1990), the underlying word order in MG is VSO. It follows that an interrogative in MG does not exhibit subject-auxiliary inversion, which is one of the ways of identifying an interrogative in English (Radford 1988: 411):

- (17) a. He will finish his PhD soon
- b. Will he finish his PhD soon?

As far as the word order is concerned, declaratives and the corresponding yes-no interrogatives are formally identical in MG. There is no way for us to tell whether the following non *na*-sentences are declaratives or interrogatives by simply looking at the word order (the sentences in (18) do not represent all possible word order combinations - surface word order is relatively free in MG):

- (18) a. Edose o Janis to vivlio tou sti Maria
 Gave-3s the John-nom the book-acc his to-the Mary-acc
 John gave his book to Mary
- b. O Janis edose to vivio tou sti Maria
 The John-nom gave-3s the book-acc his to-the Mary-acc
 John gave his book to Mary

⁴Schmerling (1980, 1982) has argued convincingly that the imperative is a distinct sentence type in English.

c. To vivlio tou edose o Janis sti Maria
the book-acc his gave-3s the John-nom to-the Mary-acc
John gave his book to Mary

d. Sti Maria o Janis edose to vivlio tou
to-the Mary-acc the John-nom gave-3s the book-acc hin
John gave his book to Mary

The same is true of *na*-clauses. Nothing in the word order of the following sentences indicates whether they are declaratives or interrogatives:

(19) a. Na plini o Kostas to aftokinito
na wash-3s-PF the Kostas-nom the car-acc
Kostas should wash the car

b. O Kostas na plini to aftokinito
the Kostas-nom na wash-3s-PF the car-acc
Kostas should wash the car

c. To aftokinito o Kostas na plini
the car-acc the Kostas-nom na wash-3s-PF
Kostas should wash the car

To avoid confusion let me point out here that in MG there are wh-interrogatives both in the indicative and the subjunctive (some evidence will be given at the end of this section). For example:

(20) a. Pou pai o Petros?
where go-3s the Peter
Where is Peter going/does Peter go?

b. Pou na pai o Petros?
where na go-3s-PF the Peter
Where should/could/would Peter go?

The only formal difference in MG between declaratives and the corresponding yes-no interrogatives usually mentioned in the literature (eg. Joseph and Philippaki-Warbuton 1987: 4) is intonation. The intonation associated with interrogatives is a rising one with an optional slight fall at the end of the utterance, whereas declaratives are characterised by a falling intonation. Depending on the intonation pattern with which each of the sentences in (18) and (19) are uttered, they are taken to be declarative or interrogative.⁵

It is true that, for example, (19a) is understood as a question when uttered with a rising intonation, whereas when it is uttered with a generally falling intonation it is understood as a statement. It does not necessarily follow, however, that the different intonation patterns with which (19a) may be uttered are a reflex of the different underlying syntactic structures it may have: the declarative and the interrogative. (I assume here that what makes a syntactic representation interrogative is the presence of a certain feature, let's call it [+q], under C; when this feature is absent then the sentence is declarative; imperatives have a separate feature [imp] (Beukema and Coopmans 1989)). It might, for example, be that (19a), or any other of the sentences in (18) and (19), is syntactically a declarative uttered with interrogative intonation thus functioning as a question. This does happen in English: in English you may ask a question with a declarative sentence:

(21) John went yesterday?

In chapter 3 I will consider a case of "fake" interrogatives in MG, i.e. sentences which function as questions but which are not syntactically interrogatives.

Although intonation may not be a very reliable diagnostic for whether a sentence is declarative or interrogative, there are a few other tests that we may use to identify the syntactic sentence type. According to recent work in syntax (Ladusaw 1981, Linebarger 1987, Progovac 1993), negative polarity items are licensed by certain kinds of operators. One such operator is the operator associated with interrogative syntax, as we can see from the English examples in (22):

⁵Intonation is the only grammatical feature marking interrogatives in other languages as well, for example Jacalteco (Craig 1977).

- (22) a. Will John meet anyone?
b. *John will meet anyone

(22a) is fine whereas (22b) is ungrammatical because there is no operator to license the polarity item *anyone*. It follows that a fake interrogative, like the one in (21), will not allow a polarity item. This is indeed the case as we can see from (23):

- (23) *John went anywhere yesterday?

If this is correct, then we can use polarity items as a diagnostic for whether a sentence is declarative or interrogative in MG. Consider (24):

- (24) Ide o Janis kanena
saw-3s the John anyone/noone

The prediction is that (24) will be acceptable, if there is an interrogative operator in the sentence structure thereby licensing the polarity item *kanena*; otherwise it will be ungrammatical. And indeed, uttered with a rising intonation, and therefore interpreted as a question, (24) is grammatical; uttered with a falling intonation, however, and therefore interpreted as a statement, it is ungrammatical. So, using the full stop to indicate a declarative and the question mark to indicate an interrogative, we get:

- (25) a. Ide o Janis kanena?
saw-3s the John-nom anyone/noone
Did John see anyone/noone?

b. *Ide o Janis kanena.
saw-3s the John-nom anyone
*John saw anyone/noone

The situation is the same with respect to *na*-clauses: (26a) uttered with a rising intonation is fine, which indicates the presence of the interrogative operator, whereas (26b) uttered with falling intonation is out:

- (26) a. Na di o Janis kanena?
 na see-3s-PF the John-nom anyone/noone
 Should John see anyone/noone?
- b. *Na di o Janis kanena.
 na see-3s-PF the John-nom anyone/noone
 John should see anyone/noone

Another way of distinguishing between declaratives and the corresponding yes-no interrogatives in English is the phrase *or not?*, which may be part of a yes-no interrogative, but may only follow a declarative sentence forming a separate utterance. For example, consider the sentences in (27):

- (27) a. Did John leave yesterday or not?
 b. John left yesterday. Or not?
 c. *John left yesterday or not?

In (27a) the phrase *or not?* has been appended to the interrogative *Did John leave yesterday*, thereby forming what Bolinger (1978) calls an alternative question. *Or not?* may of course be a separate utterance following a declarative sentence as in (27b). However, *or not?* cannot be appended to a declarative sentence as we see from (27c).

In MG the situation is the same. Consider:

- (28) a. Pige sto komotirio htes i Maria i ohi?
 went-3s to the hairdresser's-acc yesterday the Mary-nom or not
 Did Mary go to the hairdresser's yesterday or not?
- b. Pige sto komotirio htes i Maria. I ohi?
 went-3s to the hairdresser's-acc yesterday the Mary-nom. Or not?
 Mary went to the hairdresser's yesterday. Or not?

- c. **Pige sto komotirio htes i Maria i ohi.*
 went-3s to the hairdresser's-acc yesterday the Mary-nom or not.
 Mary went to the hairdresser's yesterday or not.

I ohi? may be appended to the sentence *pige sto komotirio htes i Maria* when uttered with a rising intonation, which suggests that (28a) has interrogative structure. *I ohi?* may be a separate utterance following a declarative sentence as in (28b). Finally, as expected, *i ohi?* cannot be appended to the sentence *pige sto komotirio i Maria* when it is uttered with a generally falling intonation. This suggests that (28c) is declarative.

Na-clauses behave in exactly the same way:

- (29) a. *Na pai sto komotirio i Maria i ohi?*
 na go-3s-PF to the hairdresser's-acc the Mary-nom or not
 Should/could Mary go to the hairdresser's or not?
- b. *Na pai sto komotirio i Maria. I ohi?*
 na go-3s-PF to the hairdresser's-acc the Mary. Or not?
 Mary should/could go to the hairdresser's. Or not?
- c. **Na pai sto komotirio i Maria i ohi.*
 na go-3s-PF to the hairdresser's-acc the Mary-nom or not
 Mary should go to the hairdresser's or not

(29a) is uttered with a rising intonation; (29c) with falling intonation.

Finally, with regard to utterances like (20) above, it can easily be shown that they are interrogatives. First, note the *wh*-word. Second, they can be embedded under interrogative predicates, such as *ask* and *wonder*. It is generally assumed (Grimshaw 1977, Radford 1988: 464) that inherently interrogative predicates take interrogative complements. So, for example, in English:

- (30) a. I asked you why John left
 b. I wonder where John is staying

There is little doubt that the embedded sentences in (30a,b) are interrogatives. The same holds for the embedded clauses with or without *na* in (31):

- (31) a. Se rotao jati (na) efige o Janis
you ask-1s why (na) left-3s the John
I am asking you why John left/would leave
- b. Anarotieme pou (na) meni o Janis
wonder-1s where (na) stay-3s the John
I wonder where John is staying/may be staying

If the embedded clauses in (31) are interrogative, then they should also be interrogative when they occur on their own, as in (32):

- (32) a. Jati (na) efige o Janis?
why (na) left-3s the John
Why did John leave/Why would John leave?
- b. Pou (na) meni o Janis
Where (na) stay-3s the John
Where is John staying/Where may John be staying?

In conclusion, there is good evidence that *na*- and non *na*- clauses may be either declaratives or interrogatives. The hearer decides whether a sentence is declarative or a yes-no interrogative on the basis of the intonation pattern: rising intonation with an optional slight fall at the end indicates interrogative syntax and falling intonation indicates declarative syntax. As for utterances like (32), the hearer knows they are wh-interrogatives because of the presence of the wh-word and because they are typically uttered ^{with} rising intonation with an optional fall at the end. In the remaining sections of this chapter and in the first half of the next chapter I will discuss the interpretation of declarative *na*-clauses, i.e. *na*-clauses

uttered with a falling intonation which indicates that they are underlyingly declaratives.⁶

2.3.2. The role of processing effort considerations

In this section I will show that processing effort considerations play an important role in the way *na*-clauses are interpreted. In particular, I will argue that as a result of such considerations a *na*-clause is typically interpreted as describing a state of affairs in a world other than the actual one.

Let me start by taking a step back. In earlier work (Rouchota 1991b) I suggested that *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a non-actual world. This proposal had to be dropped and replaced by the weaker one I put forward in Rouchota (to appear, a) and in the first chapter of this thesis, namely, that *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. This change was motivated mainly by *na*-clauses like those in (33), where the world described is actual (the actual world is standardly considered to be one of the possible worlds):

- (33) a. Sinehizi na vrehi
continue-3s na rain-3s
It continues to rain
- b. Arhizi na vrehi
begin-3s na rain-3s
It begins to rain

Note that such verbs may not take a non *na*-complement.

There is no doubt that the semantics of *na*-clauses should involve the notion of possible rather than non-actual world. On the other hand, there is also little doubt that *na*-clauses are very often interpreted as describing states of affairs

⁶I am indebted to Hans van de Koot and Misi Brody for helping me construct the arguments presented in this section.

in worlds other than the actual one. We saw many examples of this in chapter 1; here are a couple more:

- (34) a. Na katharisis to banio
na clean-2s-PF the bathroom-acc
Clean the bathroom
- b. makari na iha zisi tin epohi tou Napoleonta
wish-particle na had lived-1s the time of Napoleon
I wish I had lived in the time of Napoleon

If we consider *na*-complement clauses more carefully, we will note that mostly, when the main verb allows both a *na*- and a non *na*-complement, the *na*-complement represents the described state of affairs as existing in a world other than the actual one. Consider for example:

- (35) a. ksero oti magirevo
know-1s that cook-1s
I know that I am cooking
- b. ksero na magirevo
know-1s na cook-1s-IPF
I know how to cook
- (36) a. Herome pou se vlepo
be happy-1s that you see-1s
I am happy that I see you
- b. Herome na se vlepo
be happy-1s na you see-1s
I am happy to see you

(35a) entails that the speaker is cooking, (35b) does not; (36a) entails that the speaker sees the hearer at the time of utterance; (36b) does not.

This can be easily explained on the basis of considerations of relevance. As argued in chapter 1, non *na*-clauses represent states of affairs in the base world. In contexts other than fiction, antecedents of conditionals, suppositions, jokes, etc., the base world will typically be the actual world. The weaker, possible worlds, semantics of *na*-clauses, on the other hand, is such that it allows for the proposition expressed to be entertained as a description of the actual world. Considerations of processing effort, however, predict that if the speaker intends to communicate that the proposition expressed is entertained as a description of a state of affairs in the actual world she will generally use, if allowed by the grammar (cf. (33a&b)), the non *na*-complement clause to do so. As I explained earlier, the amount of effort required to process an utterance depends on the accessibility of the interpretations under consideration, on the one hand, and on the linguistic complexity of the utterance, on the other. The actual world interpretation is the standard interpretation of a non *na*-clause. So, in processing *na*-clauses, for example (36b), the hearer will infer that the proposition expressed by the complement clause is entertained as a description of a world other than the actual one. If the speaker had intended to communicate that the proposition expressed by the complement clause is entertained as a description of a state of affairs in the actual world, then she would have uttered (36a), thus saving the hearer some processing effort.

An interesting case to consider here is the perception verbs, like *vlepo* "see", *akouo* "hear" and *niotho* "feel". They may take *na*-complements, in which case the world described in the *na*-complement is understood to be actual, as we can see in the following example:

- (37) *vlepo/ida to Jani na pezi piano*
 see/saw-1s the John-acc na play-3s-IPF piano
 I see/saw John play the piano

Such verbs, however, may also take non *na*-complements introduced by the complementisers *pou* and *oti*. Consider:

(38) Vlepo pou o Janis pezi/epekse piano
 see-1s that the John-acc play-3s/played-3s piano
 I see John playing the piano/that John played the piano

(39) vlepo oti o Janis pezi/epekse piano
 see-1s that the John-acc play-3s/played-3s piano
 I see (:I infer) that John plays/played the piano

Note that in (39) the complement clause is not a description of a state of affairs but rather a report of a thought.⁷ On the other hand, in both (37) and (38) the complement clause describes a state of affairs in the actual world. One of the differences between (37) and (38) is that the complement verb in (38) may bear tense morphology whereas in (37) it cannot. When (37) and (38) are negated, the familiar contrast between possible (= other than the actual) - actual world returns (as well as the ability of the *na*-clause to be tensed):

(40) Den ida na epekse piano o Janis
 not saw-1s na played-3s piano the John
 I didn't see John play the piano (:John may not have played the piano as far as I saw)

(41) Den ida pou epekse piano o Janis
 not saw-1s that played piano the John
 I didn't see John playing the piano (:John played the piano but I did not see him)

A full account of these data would require a study of the semantics of perception verbs and the different types of complementation in MG, and lies outside the scope of this dissertation. Two points are interesting for my purposes here. First, the fact that perception verbs may take *na*-complements is not a counterexample to the proposed semantics for *na*-clauses: the actual world interpretation is allowed by the

⁷This suggests that the complementizer *oti* in MG may be analyzed as an interpretive use marker. Similar suggestions have been put forward for the complementizer *that* in English by Blass (1990). For the notion of interpretive use see Sperber and Wilson (1986:224-231) or chapter 3 of this dissertation.

semantics of *na*-clauses, and in the case of a *na*-clause which is the complement of a perception verb it is imposed by the verb itself.⁸ Second, the accessibility considerations which account for the interpretation of (35a&b) and (36a&b) do not seem to play such an obvious role in the interpretation of (37) and (38). I do not think that this is a serious objection to the pragmatic account I proposed, especially since the same considerations seem to be back in the picture when such clauses are negated as in (40) and (41). Nevertheless, we need a more detailed investigation of the semantic differences between (37) and (38).

In adverbial clauses we find that the same pragmatically motivated considerations are in operation. For example, the antecedent of a conditional may be introduced by *an* "if" followed by an indicative clause, or it might be a *na*-clause as illustrated in (42):

- (42) a. *an ton ipostiriksi o tipos, tha kerdisi ke tis epomenes ekloges*
 if him support-3s the press will win-3s and the next election
 If the press supports him, he will win the next election as well
- b. *na ton ipostiriksi o tipos, tha kerdisi ke tis epomenes ekloges*
na him support-3s the press will win-3s and the next election
 Should the press support him, he will win the next election as well

Now, *na*-conditionals cannot be used if the state of affairs described in the antecedent has been contextually established to be actual, as noted by Nikiforidou (1990:47-59). For example,

⁸For a discussion of the semantic and syntactic differences between *pou* and *na*-complement clauses see Christidis (1982, 1983). This issue relates to the semantic and syntactic differences between gerundival and infinitival complements of perception verbs in English (Akmajian 1977, Declerck 1981, 1982, Mittwoch 1990):

- (i) I saw John cross the road
 (ii) I saw John crossing the road

- (43) a. pigeno stin Ellada avrio
 go-1s to the Greece tomorrow
 I am going to Greece tomorrow
- b.? na pigenis stin Ellada avrio dose se parakalo afto to gramma ston Petro
 na go-2s to the Greece tomorrow give-imp please this the letter to the
 Peter
 Should you be going to Greece tomorrow give this letter to Peter please
- c. an pigenis stin Ellada avrio dose se parakalo afto to gramma ston Petro
 if go-2s to the Greece tomorrow give-imp please this the letter to the Peter
 If you're going to Greece tomorrow give this letter to Peter please

In the context of (43a) only (43c) is acceptable. This follows naturally from the semantics I am proposing for *na*-clauses together with the pragmatically motivated assumption that, if the speaker intends to express a proposition entertained as a description of a state of affairs in the actual world, she will use a non *na*-clause.⁹

Processing effort considerations hinging on accessibility play an important role in the interpretation of independent *na*-clauses as well. Moreover, note that non *na*-clauses are linguistically less complex than *na*-clauses. It follows that if the speaker intends to communicate that the proposition expressed is entertained as a description of a state of affairs in the actual world she will typically choose to utter a non *na*-clause because this is the linguistically cheapest way to do so. If, on the other hand, she intends to communicate that the proposition expressed is entertained as a description of a state of affairs in a possible world, i.e. in a world other than the actual, then she will choose a *na*-clause. This assumption is the basis for the discussion in the following sections. In chapter 5 I will discuss in detail

⁹A full account of *na*-conditionals and the way they differ from the corresponding indicative conditionals lies outside the scope of this dissertation. It is interesting to note here that in MG *na*-clauses may occur as the antecedent of both hypothetical and counterfactual conditionals, unlike other languages where the subjunctive is used only in counterfactual conditionals. Another interesting issue in connection with what are usually called *na*-conditionals is whether this construction is semantically a conditional at all or whether the conditional interpretation is pragmatically derived (see Rouchota in preparation).

the interpretation of restrictive relative clauses in the indicative and subjunctive and I will show that the same considerations play a crucial role there as well.

2.3.3. *Na*-clauses with imperatival force

I will now discuss the interpretation of independent declarative *na*-clauses with imperatival force. When I say "*na*-clauses with imperatival force", I mean *na*-clauses used in virtually every way that imperatives may be used. To put it in terms of traditional grammar, I will be looking at *na*-clauses used "instead of" the imperative. I will then compare the interpretation of such *na*-clauses and the corresponding imperatives, and explain the factors which determine the speaker's choice between a *na*-clause and an imperative in a particular situation.

Let us consider the following situation: Peter has been working very hard and feels so fed up with studying that he is considering giving it up. Jane is a very close friend of his who has been through a similar phase in the past and believes that Peter should not give up his studies. The following exchange takes place:

- (44) Peter: Eho trellathi sti doulia
have gone mad-1s at work
I'm overwhelmed by work
Jane: na dhoulevis mono oso thelis
na work-IPF-2s as much as want-2s
Work only as much as you want

Jane will typically be understood to be advising Peter to work as much as he wants and no more. Let me now trace the interpretation process.

Processing Jane's utterance, the hearer will recognise, partly by decoding and partly by inference, that the proposition "Peter works only as much as he wants" is entertained as a description of a possible world. This interpretation, however, is too weak to be consistent with the hearer's expectation of optimal relevance, i.e. it does not achieve enough effects to be worth the hearer's attention. For example, it does^{not} address Peter's current problems. The hearer will, therefore, have to put in some more inferential work and enrich this schematic

representation up to the point where it yields an adequate range of contextual effects.

To start with, the hearer is intended to infer that the state of affairs represented by Jane's utterance is truth-evaluable in a world other than the actual one, since, if the speaker had intended to communicate that it is a description of the actual world, she would have used the non *na*-counterpart in (45):

- (45) *doulevis oso thelis*
 work-2s as much as want-2s
 you work/are working as much as you want

However, the interpretation of (44), on which Jane is communicating that the proposition expressed by her utterance is entertained as a description of a state of affairs in a world other than the actual one, is not consistent with the principle of relevance either: it does not give rise to enough effects to be worth the hearer's attention. Clearly, the indeterminate world type description "non-actual" has to be further enriched.

Given contextual assumptions such as that Jane has gone through a similar phase herself and therefore knows how to deal with such a crisis, and given that she is very close to Peter and wants to help him, the first interpretation which comes to mind and gives rise to an adequate range of effects is that the proposition expressed by Jane's utterance is entertained (by Jane) as a description of a state of affairs in a world which is desirable and potential.¹⁰ Jane regards the world in which Peter works only as much as he wants as quite desirable to Peter himself. Moreover, she regards this world as potential, i.e. as far as she knows, nothing prevents this world from becoming actual. In fact in this context the world where Peter works as much as he likes is entirely under Peter's control. This interpretation gives rise to enough contextual effects. It provides Peter with a possible solution to his problem: Peter should work as much as he wants and no more. Moreover, it may contradict and eliminate Peter's existing belief that Jane does not believe in taking it easy, or it may combine with the contextual

¹⁰As we will see in chapter 3, the proposition expressed by a *na*-clause (as by any clause) may be entertained by the speaker or the hearer or someone else. This is another pragmatically inferred aspect of the interpretation of *na*-clauses.

assumption "if Peter works as much as he wants then he will work less than he does now" to yield the contextual implication that Peter will work less than he does now, etc.

This interpretation is the first one to come to the hearer's mind and to give rise to adequate effects which the speaker could manifestly have foreseen. So, this is the interpretation the hearer should accept, since the first interpretation consistent with the principle of relevance is the only interpretation consistent with the principle of relevance. On this analysis, the hearer processing Jane's utterance in (44) will recover the higher level explicature in (46):

(46) It is desirable to Peter and potential that he works only as much as he wants¹¹

The analysis proposed here explains why in this context Jane is understood to be advising Peter: communicating that the world in which Peter works as much as he likes is potential and desirable from his point of view gives rise to the same set of contextual effects as advising him to work as much as he likes. In Sperber and Wilson's terms (1986:245), advising is not a communicated act: you don't have to communicate that you are advising in order to advise. The potentiality and the degree and point of view of desirability of this world is all the speaker needs to communicate. This is not to say that the hearer will never construct a representation like (47) below:

(47) Jane is advising Peter to work as much as he wants

The hearer may construct such a higher level explicature when a doubt about the type of world, point of view of desirability, etc. enters his mind and this is the easiest way of consciously resolving them. But the construction of (47) is not essential in comprehending (44).

The claim put forward here, that because of considerations of relevance, the semantics of a *na*-clause may be enriched into "the world represented is

¹¹Since higher level explicatures are conceptual representations, pronouns, like "he" in (46), do not appear in them. I will often be loose in my exposition of the conceptual representations of an utterance in order to make them easier to read.

potential and desirable", can explain a range of interpretations that a *na*-clause may have. Suppose, for example, that you are a university lecturer and you have been complaining to your boss that one day a week for your research is not enough. After sufficient moaning or arguing, your boss might say:

- (48) Endaksi. Na asholise me tin erevna dio meres tin evdomada.
OK. na engage-2s-IPF with the research two days the week
OK. Engage in research two days a week.

In this case the speaker is understood to be issuing permission to the hearer to take two days a week for his research.

The *na*-clause in (48) stands in clear semantic contrast with the non *na*-clause in (49), which would be unsuitable in the context described above for (48):

- (49) Asholise me tin erevna dio meres tin evdomada
engage-2s with the research two days the week
You are engaging in research two days a week

It follows that, in uttering (48), the speaker does not intend to communicate that the state of affairs where the hearer engages in research is located in the actual world. If this was her intention, she would have uttered (49). It is also obvious that the speaker does not intend to say simply that the proposition "the hearer engages in research two days per week" is entertained as a description of a state of affairs in a world other than the actual one. This interpretation would not even make sense after the speaker's expression of agreement by saying *Endaksi* "Ok". The most easily accessible interpretation that yields enough effects which the speaker could manifestly have foreseen in this context, without putting the hearer to unjustified effort in deriving them, is that the proposition "the hearer engages in research two days a week" is entertained as a description of a state of affairs in a desirable and potential world. It is already manifest in this context that the described state of affairs is very desirable to the hearer. What is at issue, is the potentiality of this state of affairs, which, as is clear from the context, depends on the speaker, who is in a position of authority. So, by uttering (48), the speaker is not only conceding the desirability of the described state of affairs, but more crucially she is

guaranteeing its potentiality. This interpretation gives rise to enough effects to be worth the hearer's attention. For example, it may combine with other contextual assumptions to yield the contextual implication that the speaker will now be able to write some paper, or that he may work at home two days a week; it may strengthen the hearer's belief that doing research is an important aspect of his job, etc. Since this interpretation satisfies the optimal relevance criterion, it is the one the hearer should accept.

As with (44), the hearer processing (48) may, if the need arises, construct a higher level explicature along the lines of (50):

(50) The speaker permits the hearer to engage in his research two days a week

To understand (48), however, all the hearer needs to recognise, is that the speaker grants the potentiality of a state of affairs which is desirable to the hearer.

It may be interesting at this point to compare (48) with (51) below, uttered in the context I gave earlier for (48):

(51) Endaksi. Tha asholise me tin erevna dio meres tin evdomada

OK. will engage-2s with the research two days the week

OK. You will engage in research two days a week

Note first that both (48) and (51) describe a state of affairs that does not obtain at the time of utterance and which may take place in the future, but they achieve this in different ways. Processing (48), the hearer infers, as I showed, that the described state of affairs is located in a desirable and potential world. A potential world is a world which is not yet actual but may become actual, it is an achievable world. Moreover it is evident in the context that the hearer is capable of bringing about this world. It follows that if the described state of affairs is ever brought about, this may only happen at some point in time after the time of utterance. So, the future time interpretation of (48) is pragmatically inferred from the particular way of enriching the semantics of *na*-clauses and contextual assumptions about the hearer's control over the described state of affairs. The same point holds of course for (44). In (51), on the other hand, future time is linguistically encoded in the future particle *tha* (and by *will* in English). The proposition expressed by (51)

is entertained as a description of a state of affairs in the actual world extended in the future.

This does not mean that every time a *na*-clause describes a state of affairs in a desirable and potential world it will have a future time interpretation. In predetermined cases, i.e. in cases where it is evident that the actualization of the described state of affairs is not within anyone's reach, the default future interpretation may be excluded by specific tense marking on the verb. Consider for example:

- (52) Ah, na min figate htes
ah, na not went-2p yesterday
Ah, don't have left yesterday

In this case the past tense morphology and the adverb *htes* "yesterday" leave no doubt that the described state of affairs is located in the past. Note that as far as the speaker knows, the state of affairs where they did not leave yesterday is part of a potential world: given her assumptions about the actual world, they may have left or not. On the other hand, (53) below has future time interpretation and is a predetermined case:

- (53) Ah, na min ehis magirepsi protou ftaso
Ah, na not have cooked-2s before arrive-1s
Ah, don't have cooked before I arrive

Such examples suggest that, if the *na*-clause describes a state of affairs in a desirable and potential world and has past tense marking, then it is a predetermined case; if, however, the *na*-clause describes a state of affairs which is not within the speaker's or the hearer's reach (i.e. is a predetermined case), then it may be located either in the future, in the past or in the present (for example, "Don't be angry", uttered while waiting for the addressee to open the door). This makes sense since you may consider a state of affairs desirable and potential whether it already holds or not, as long as you do not know whether it holds.

To complete the comparison of (48) and (51), note that whereas (51) could be uttered in the context given for (48), it would have a different impact. The

speaker would be understood as saying that the hearer will engage in research two days a week, and only thereby granting him permission to do so. Uttering a non *na*-clause, the speaker communicates that the proposition "the hearer will engage in research two days per week" is entertained by her as a description of a state of affairs in the actual world. It is mutually manifest from the context that the world in which the hearer does research two days a week is desirable to the hearer; it is also mutually manifest that the speaker is in a position of authority over the hearer and that it is up to her to decide whether the hearer may spend two days per week doing research. In this context (51) succeeds in granting the hearer permission to carry out research two days every week by contextually implicating it. On the other hand, (48) achieves the same result in virtue of what it is taken to communicate explicitly, as shown earlier.

The analysis proposed here also accounts for cases, where the speaker uttering a *na*-clause expresses her will or desire that something be done: the typical illocutionary force of an imperative. For example, suppose you have told me you needed some files but I still have not brought them to you. Next time you see me, you say:

- (54) *na mou feris tous fakelous amesos, parakalo*
 na me-gen bring-2s-PF the files-acc immediately, please
 Bring me the files immediately, please

Obviously, (54) is not intended to be construed as describing the actual world. Such an interpretation would not be suitable in this context. It is also not intended to be understood as just describing a world other than the actual one. This interpretation would not be relevant enough to be worth any attention. The request marker *parakalo* "please", as well as the rest of the context will help the hearer form the hypothesis that the proposition expressed by (54) is entertained by the speaker as a description of a state of affairs in a potential and desirable world. In this case the hearer is expected to infer that the speaker regards the world represented as desirable to herself and potential. Given that it is evident that the hearer can bring about the described state of affairs, (54) will be understood as a request. This interpretation satisfies the principle of relevance, because it is the first one to come to mind that yields an adequate range of contextual effects for

no unjustifiable effort. For example, it may combine with other contextual assumptions to yield the contextual implication that the speaker needs to see the files quickly or that the speaker does not trust the hearer to remember that he should bring her the files, etc.

As with the other examples we considered, the hearer may construct a higher level explicature like (55) below; this, however, is not necessary in order to understand (54).

(55) The speaker requests the addressee to bring her the files immediately

This account provides a reasonable explanation of why, in cases like (54), the hearer will in typical circumstances do what the speaker tells him to do: the assumption that the described world is desirable to the speaker provides the hearer with a reason for bringing it into existence. On the other hand, when the speaker uses a *na*-clause to offer advice, as in (44), or grant permission, as in (48), she doesn't (necessarily) care whether the world represented will become actual or not. On the proposed analysis, this is explained by the assumption that, in these cases, the speaker regards the described world as potential and desirable to the hearer: whether he will go on to bring it about is his own concern and not the speaker's.

When the desirability of the described state of affairs is resolved in favour of the speaker, the *na*-clause may be interpreted as a request or an order or a plea, depending on additional contextual assumptions. In the above context (54) is interpreted as a request. Suppose now that it is uttered in a military office, by a general to a soldier. In this case, (54) is more likely to be interpreted as a command, given the contextual assumptions about the social status of the participants. Alternatively, suppose that it is evident from the context that it is extremely desirable to the speaker to have the files brought to her. Say, for example, that (54) is uttered by a research student, desperate to lay her hands on certain documents, to an uncooperative librarian. In this case, (54) would be understood as a plea.

I have shown in this section how the interpretation of *na*-clauses expressing advice, permission, order, request, exhortation, plea, suggestion etc. can be given a psychologically plausible account within relevance theory. Such interpretations

involve pragmatically enriching the semantics of *na*-clauses into "desirable and potential world"; they are distinguished on the basis of (a) from whose point of view the described world is desirable: when the described world is understood to be desirable to the hearer, the utterance has the illocutionary force of permission or advice; when the described world is desirable to the speaker, then the utterance has the illocutionary force of an order, request, or plea, etc; (b) the degree of desirability: in the case of a plea the described state of affairs will be more strongly desired than in the case of a simple request. In all the examples we have considered, the propositional attitude description "desirable and potential world" is derived inferentially on the basis of considerations of optimal relevance. The context of utterance, certain linguistic elements functioning as illocutionary force indicators like *parakalo* "please", *endaksi* "OK", *ebros* and *ade* "come on" and the intonation will guide the hearer in obtaining the intended interpretation by making certain assumptions more accessible than others.

2.3.4. *Na*-clauses and the imperative in MG

In MG there is a morphologically distinct imperative form which, following the Wilson and Sperber semantic analysis of imperatives, I assume, encodes the information that the proposition expressed is entertained as a description of a state of affairs in a desirable and potential world. The imperative in MG, like the imperative in English may be used to issue advice, grant permission, give orders, make requests, pleas, etc. So, for every *na*-clause discussed in the previous section there is a corresponding imperative. For example, instead of (54) the speaker could have uttered (56) in the same context:

- (56) Fere mou tous fakelous
 bring-imp me the files-acc
 Bring me the files

According to the analysis I have proposed here, (54) is costlier to process than (56): whereas the imperative in (56) encodes that the state of affairs represented is located in a potential and desirable world, (54) encodes simply that the state of

affairs described is located in a possible world; this will then be enriched into "desirable and potential", as the result of inference made necessary by the context and considerations of relevance, as I explained in the previous section. We could say that (54) is less explicit than (56) in the same way that (57) is less explicit than (58) below:

(57) It will take some time to repair your watch

(58) It will take longer than you think to repair your watch

Notice also that the *na*-clause in (54) is longer, linguistically more complex, than the imperative in (56). Therefore, one would expect, on the basis of the principle of relevance, that (54) would yield some extra or different contextual effects. And indeed it does. (54), and *na*-clauses in general when compared to their imperative counterparts, are gentler, politer, less direct, more remote (cf. Tzartanos 1945/1989, Veloudis 1987). These overtones follow naturally from the semantics of *na*-clauses: because of their semantic indeterminacy, *na*-clauses are less imposing than the corresponding imperatives. This is why they are very often best translated into English with the modals (eg. 'you should bring me the files').

In some contexts the use of a *na*-clause instead of an imperative is inappropriate. For example, if the speaker and the hearer are in danger and must run to save their lives, the speaker will most probably utter the imperative in (59) rather than the *na*-clause in (60):

(59) trekse
run-imp-PF
run

(60) na treksis
na run-2s-PF
run

This can be easily explained within my analysis. It is clear that in this situation there is no room for politeness or indirectness; all the speaker wants to

communicate is that "it is very desirable and potential that you run". Given the situation, she wants to communicate this in the most straightforward way. Thus, between the *na*-clause and the imperative construction the speaker will choose the imperative because it is less costly and doesn't give rise to unwanted effects.

For similar reasons the *na*-clause construction will not be used instead of the imperative when there is no addressee. Suppose, for example that you are late and your car won't start, or your phone is ringing and the front door is stuck:

(61) a. Ksekina panathema se
start-imp-IPF damn you
Start damn you!

b. Anikse panathema se
open-imp-PF damn you
Open damn you

In such audienceless cases there is no reason for the speaker to sound polite or indirect, so the imperative is preferred.

Moreover, as was noted in Veloudis (1987), in certain idiomatic expressions like those in (62) the imperative cannot be replaced by a *na*-clause:

(62) a. Akou na sou po (??Na akous na sou po)
Listen-imp-IPF na you say-1s-PF (na listen-2s-IPF na you tell-1s-PF)
Listen for me to speak! (:Listen to me)

b. S'ehi "siko-katse" (??S'ehi "na sikonese-na kathese")
you have-3s-IPF "get up-imp-IPF - sit down-imp-IPF (you have-3s-IPF "na
get up-2s-IPF - na sit down-2s-IPF)
He/She has you "get up-sit down" (:he/she does what she wants with you)

My analysis explains this: the *na*-clause sounds less imposing than the imperatives, which is incompatible with the meaning of these idiomatic expressions.

On the other hand, *na*-clauses may be used to describe states of affairs in desirable and potential worlds when imperative clauses are impossible to use. For example, if the subject is first or third person. Consider (63):

- (63) Na perasi o kirios Manou
na come in-3s-PF the Mr Manou
Let Mr Manou come in

uttered by a doctor seeing her patients. The hearer is expected to infer in this context that the speaker regards the world in which Mr Manou comes in as desirable to Mr Manou and potential as far as she is concerned. The imperative could not have been used here. The same goes for (64) addressed by the speaker to herself on a lazy Sunday morning:

- (64) Ante, na sikotho tora
Come on, na get up-1s-PF now
Come on, let me get up now

The speaker is expressing her belief that the world in which she gets up now is desirable to her and potential. Since this world is entirely under her control she is understood to be encouraging herself to get up. In a different context, say one in which one of the interlocutors has to get up to check something every now and then, the speaker might be understood as offering to get up now. In this case she would be granting the potentiality of the described state of affairs. (This interpretation would be more prominent, if the speaker used the pronoun "I" uttered with focus stress: *Ante, na sikotho EGO tora*, "Come on, let ME get up now")

Imperatives in MG cannot be negated. Instead, negated *na*-clauses are used. For example,

- (65) Na min vjis ekso apopse/*min vjes ekso apopse
 na not go out-2s-PF tonight/*not go out-imp tonight
 Do not go out tonight¹²

Moreover, imperatives in MG cannot carry past tense morphology. If, however, the speaker wishes to indicate that the described state of affairs has been completed in the past, if it took place at all, she may use a *na*-clause. For example, (52) repeated below:

- (52) Ah, na min figate htes
 ah, na not went-2p yesterday
 Ah, don't have left yesterday

Finally, I want to point out a few examples, which are apparently problematic for the Wilson and Sperber analysis of imperatives and the analysis of *na*-clauses used instead of the imperatives put forward here:

- (66) Na adiaforis/adiaforise gia to nomo (ke tha dis ti tha pathis)
 na ignore-2s-IPF/ignore-imp-PF the law (and will see-2s what will happen-2s)
 Ignore the law (and you'll see what becomes of you)
- (67) Ebros, na to katastrepsis/katastrepse to kenourjio mou hali
 go on, na it destroy-2s-PF/destroy-imp-PF the new mine carpet
 Go on, destroy my new carpet

Such threats and dares seem to be counterexamples to the proposed analysis since it is obvious that the state of affairs described by the *na*-clause or the

¹²In negated clauses the *na* may be dropped (this seems to be easier if the subject of the clause is second person, but it is also possible with first and third person negated *na*-clauses):

- (i) (Na) min vjis ekso apopse
 (na) not go out-2s-PF tonight
 Do not go out tonight

imperative is not believed by the speaker to be desirable to anyone. I will return to such examples in chapter 3.

2.3.5. *Na*-clauses and the expression of wishes

According to Wilson and Sperber, all imperatives encode the information that the proposition expressed is entertained as a description of a state of affairs in a desirable and potential world. However, not all utterances which express propositions entertained as descriptions of states of affairs in desirable and potential worlds are imperatives. The *na*-clauses we looked at in the last sections illustrate this point.

Hortatives in English are another case where an utterance interprets a thought entertained as a description of a state of affairs in a desirable and potential world without being an imperative. Consider the following examples:

- (68) a. May you live to be a hundred
b. May you be convinced of his innocence before it's too late
c. May you not have changed your mind before I get there
d. May you get well soon

The proposition expressed by each of the utterances in (68) is entertained as a description of a state of affairs in a desirable and potential world.¹³

¹³Imperatives and hortatives, although semantically similar, are not synonymous, as you can see by comparing (68) and (i) below:

- (i) a. *Live to be a hundred
b. *Be convinced of his innocence before it's too late
c. Don't have changed your mind before I get there
d. Get well soon

Although imperatives may be used to express good wishes and in what we called predetermined cases, they cannot always replace hortatives. Hortatives, as suggested by Wilson (1990), seem to encode the information that the proposition expressed is entertained as a description of a state of affairs in a world which is desirable and potential but clearly not within the speaker's or the hearer's control. This is why hortatives cannot be used to grant permission or give advice or issue a command. (For example, *May you turn left at the end of the road, *May you open the door). Hortatives express a certain type of wish: a wish which as far as

In MG there is no distinct hortative structure. *Na*-clauses are used instead. Consider,

- (69) a. Makari/!the na pistis gia tin athootita tou telika
desire-particle na be convinced-2s-PF for his innocence eventually
May you be convinced of his innocence eventually!
- b. Makari na ine zontano to pedi mou
desire-particle na is-3s-IMP the child mine
May my child be alive!

The interpretation of such *na*-clauses again involves pragmatically enriching the semantics of *na* into "the world described is desirable and potential". To give one example, let's follow the way (69b) is interpreted. Suppose (69b) is uttered by a distressed mother who has just heard that her beloved son has had a car accident. In this context the interpretation, on which the world in which the son is alive is merely possible, will not be considered: to start with, such an interpretation is too weak given the presence of the particle *makari* which indicates that a wish is being expressed. On the basis of the semantics of this particle, standard contextual assumptions about mothers' love for their children and their wish that they have a long, happy and healthy life, and the contextual assumption that the speaker does not know whether her son has survived the accident, the hearer will infer that the world in which the son is alive is very desirable to the speaker and potential, i.e. may be true as far as she knows, although not within the speaker's or the hearer's control.

Na-clauses may be used not only to express good wishes but also curses. Suppose I am very angry with your friend Peter, I might say:

the speaker knows may become actual (although its realisation does not depend on the speaker or the hearer). Such a wish can also be expressed with an imperative as we see in (ic&d). The only difference is that in that case the assumption that the world described is potential but not within the speaker's or the hearer's control is pragmatically inferred. This, however, does not exhaust the semantic difference between imperatives and hortatives, because it does not account for the fact that (68a&b) are fine whereas (ia&b) are not.

- (70) *Kako hrono na ehi*
 bad year na have-3s-IPF
 May he have a bad year

Processing (70), the hearer will infer that the world in which Peter has a bad year is very desirable to the speaker and potential. So, curses and wishes involve the same interpretation process; what distinguishes them is the content of the proposition expressed.

I have argued so far that a *na*-clause may communicate explicitly that the world represented is desirable and potential as a result of pragmatic enrichment of the attitudinal information *na* encodes. One would expect that, subject to particular contexts and considerations of relevance, other ways of enriching the semantics of *na*-clauses should be possible. This is indeed the case, as we will now see.

In addition to wishes which may come true, there are wishes which cannot but remain unfulfilled. For example, consider:

- (71) a. I want/hope to visit Tibet one day
 b. I wish I were Kate Moss

The contrast between wanting or hoping and wishing is expressed in main clauses in English by the use of imperatives and hortatives, on the one hand, and optatives on the other. Optatives, like those in (72), seem to be specialised for the expression of unrealised wishes:

- (72) a. If only I had been born a man
 b. Would that I had been born a man

As suggested by Sperber and Wilson (1983, ch. VII), optatives encode the information that the proposition expressed is entertained as a description of a state of affairs in a desirable and possible (i.e. simply conceivable) world.

In MG there is no distinct optative structure. *Na*-clauses are used instead. Suppose (73) is uttered by a speaker who feels disappointed by the way her life has turned out:

- (73) Ah, na ksanageniomoun
 Ah, na was born-again-1s-IPF
 Would that I were born again

Here (73) is understood to be communicating an unrealisable wish.

According to the analysis I have proposed, the *na*-clause in (73) encodes the information that the world in which the speaker is born again is possible. Assuming that the hearer shares the commonly held view that people are born only once, he will not enrich the semantic specification "possible world" into "potential world". Certain linguistic clues, like for example the particle *ah* which often functions as a desirability marker and the imperfect tense, together with contextual assumptions such as that the speaker is disappointed with her life, would have done things differently if given a second chance, etc., will guide the hearer to form the hypothesis that the proposition expressed by (73) is entertained as a description of a state of affairs in a desirable and possible world. On this interpretation the utterance achieves enough effects without putting the hearer to unjustified processing effort in deriving them. For example, it may strengthen the hearer's assumption that the speaker is in the middle of a life crisis, or it may combine with other contextual assumptions to yield the contextual implication that the speaker has regretted some of the things she did, etc.

On this analysis, (73) communicates explicitly something like (74):

- (74) It is possible and very desirable to the speaker that she is born again

In addition, (73) communicates strongly the suggestion that the world in which the speaker is born again is conceivable but could never become actual, it is not a potential world. Note here that the subjunctive in different languages is standardly associated with the expression of counterfactuality. Consider, for instance, the following examples from English and German :

- (75) a. Wenn du ein Sprachwissenschaftler wärest, würde dich jeder bewundern
 b. Hans tat so, als wäre er ein begeisterter Linguist
 (from Donhauser 1988)

- (76) a. Had I started at 9 o'clock sharp I would have finished by 4 in the afternoon

On the analysis I am proposing here, the suggestion of counterfactuality is implicitly communicated. One of the reasons for a proposition to be entertained as a description of a state of affairs in a possible world is that that state of affairs cannot be realised in the actual world. Contextual assumptions (the speaker's and hearer's beliefs about what may become actual and what may not) will make this interpretation more accessible. A linguistic clue pointing towards this interpretation is the imperfect tense. The imperfect and pluperfect in MG seem to encourage the derivation of such an implicature. The connection between forms of past tense and the expression of irrealis across languages is well known, although no satisfactory explanation of it has been offered (Palmer 1986: 209-215). Evidence for the claim that the imperfect and the pluperfect are often used in MG to indicate that the world represented is merely possible comes from their systematic use in the antecedent of counterfactual conditionals:

- (77) An to mathena/iha mathi noritera, tha iha pai
if it found out-1s-IPF/had found out-1s earlier, will had gone-1s
If I had found out earlier, I would have gone

2.3.6. *Na*-clauses and the expression of potentiality

All the *na*-clauses we have considered so far involve expression of desirability: the described state of affairs is pragmatically inferred to exist in a desirable world. In the last two sections, I want to show that the proposition expressed by a *na*-clause may be entertained as a description of a state of affairs which is merely potential or possible.

Imagine the following situation. Mary has been engaged to John for a year now. Peter knows that they have recently had a chat about when they are going to get married. When they meet Peter asks Mary whether they are planning to get married soon, and she says:

- (78) Isos na pantreftoume ton Septemvri
 Perhaps na get married-1p-PF the September
 Perhaps we may get married in September

In this context the hearer, Peter, is expected to infer that the world in which Mary and John get married in September is not just possible, i.e. conceivable. He knows that Mary has reason to believe that this world may become actual: they have been engaged for a long time, they both want to get married, they have been discussing when the marriage should take place. Given such contextual assumptions, the hearer will infer that the world in which Mary and John get married in September is potential. So, (78) communicates the higher level explicature:

- (79) It is potential that Mary and John get married in September

Further support for the claim that the semantics of a *na*-clause may be enriched into "the world described is potential" comes from the idiomatic use illustrated in (80):

- (80) a. Ego, na pis, agonistika gia na megaloso ta pedia mou
 I, na say-2s-PF, fought-1s in order to bring up the children mine
 I, you could say, had to fight in order to bring up my children
- b. Esi, na poume, tin epiases tin kali
 you, na say-1pl-PF, her got the good
 You, we could say, did very well for yourself

In this parenthetical use it is clear that the proposition expressed by the *na*-clause is entertained as a description of a state of affairs in a potential world.

2.3.7. *Na*-clauses and the expression of possibility

I have shown so far that the interpretation of independent *na*-clauses may involve enriching the semantics of *na* into "the world described is desirable and potential", "the world described is desirable and possible" and "the world described is potential", depending on the context and considerations of optimal relevance. Are there any cases where independent *na*-clauses are interpreted as representing states of affairs which are merely possible, i.e. simply conceivable (without being desirable and/or potential) ?

Note first that, as I pointed out in chapter 1, the proposition expressed by a *na*-clause may be entertained as a description of a state of affairs in a possible world in complement clauses, for example (81), and in certain adverbial clauses, for example the relative in (82):

- (81) Apofasisa na figo
decided-1s na leave-1s-PF
I decided to leave

- (82) Hriazomaste mia gineka pou na kseri galika
need-1pl a woma tha na kno-3s-IPF French
We need a woman who knows French

Also, consider the independent *na*-clauses in (83):

- (83) a. Akoma na erthi to leoforio
yet na come-3s-PF the bus
The bus is yet to come
- b. Paraligo na pnigoume
nearly na drown-1pl-PF
We nearly drowned

The proposition expressed by the *na*-clause in these examples is entertained as a description of a state of affairs in a possible world.¹⁴ In the next chapter I will consider *na*-clauses like (84):

- (84) Na tis grafi ena grama kathe mera. Ti sinithia!
na her write-3s a letter every day. What habit!
To write her a letter every day. What a habit!

I will show that in such cases also the proposition expressed by the *na*-clause is entertained as a description of a state of affairs in a possible world (with no commitment as to whether it holds in the actual world or not), though more needs to be said to account for their expressiveness.

2.4. Summary

In this chapter I have argued that, assuming the univocal semantics for *na*-clauses I proposed in chapter 1, we can account pragmatically for the several interpretations independent *na*-clauses may have. I have shown that the semantic representation of an utterance containing a *na*-clause highly underdetermines the interpretation it may have in a certain context. I considered *na*-clauses used instead of imperatives, *na*-clauses used to express realisable and unrealisable wishes and *na*-clauses expressing potentiality. I showed that all these interpretations are arrived at by pragmatically enriching the semantics of *na*. This pragmatic process is motivated and constrained by considerations of optimal relevance. In this chapter I also looked at declarative *na*-clauses expressing mere possibility. In the next chapter I will consider more cases of *na*-declaratives expressing possibility, as well as interrogative *na*-clauses, the interpretation of which hinges on the relevance-theoretic notion of interpretive use.

¹⁴On this account, the implications "The bus has not come yet" and "We did not drown" communicated by (83a) and (83b) respectively would have to be analysed as contributing to the implicitly communicated content of the utterance.

CHAPTER 3

ON THE INTERPRETATION OF *NA*-CLAUSES: *NA*-CLAUSES AND INTERPRETIVE USE

3.1. Introduction

In Chapter 1 I argued that *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. In the last chapter I showed that we can maintain this unitary semantics despite the apparently diverse interpretations independent *na*-clauses may have. I argued that the imperative-, hortative-, and optative-like interpretations of *na*-clauses, as well as the interpretation of *na*-clauses expressing potentiality are arrived at by pragmatically enriching the semantics of *na*. In this chapter I will discuss the interpretation of *na*-clauses expressing surprise and disapproval, *na*-clauses used instead of tensed clauses in narration and independent interrogative *na*-clauses. I will argue that the interpretation of such *na*-clauses can also be accounted for as falling out from the semantics of *na*-clauses, on the one hand, and considerations of optimal relevance on the other. In particular, I will show that the interpretation of emotive and narrative *na*-clauses involves the communication of a complex higher level explicature consisting of two levels of embedding. As for interrogative *na*-clauses, I will argue that their interpretations may be given a psychologically plausible explanation on the basis of the relevance-theoretic assumptions about the way interrogative utterances are interpreted in general.

3.2. *Na*-clauses and actual states of affairs

I have proposed a semantic account of *na*, according to which *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. I then argued extensively in the last chapter that because of processing effort considerations an independent *na*-clause is standardly interpreted as describing a state of affairs in a world other than the actual. In this section I want to start considering a few uses of *na*-clauses which do not seem to

be amenable to such an analysis. The problem is twofold: (a) there are *na*-clauses which seem to describe states of affairs which exist in the actual world, and (b) there are *na*-clauses the interpretation of which does not involve the description of a state of affairs in a world but rather the representation of a proposition (thought or utterance).

Consider the following situation. Suppose that in the weekends Peter does nothing but watch television all day. Both his mother and father know this and do not like it. They had expected their son to have friends, go out and in general have an active social life. Suppose further that they have just walked in and out of the sitting room where Peter is watching TV. His mother utters (1) with an angry and sad tone of voice¹:

- (1) Na pernai oli tou tin ora brosta stin tileorasi
 na spend-3s-IPF all his the time in front of the television
 To spend all his time in front of the television

Obviously, the state of affairs described by the *na*-clause in (1) exists in the actual world. Moreover, both speaker and hearer know this. The speaker does not utter (1) in order to inform the hearer that Peter spends all his time watching television or, for that matter, in order to inform him that it is possible that Peter spends his time in this way. The point of the speaker's utterance is to express how she feels with regard to Peter's way of life. In this context the speaker clearly disapproves of Peter's life style and is disappointed in him. She may in fact choose to make her attitude explicit by exclaiming "how terrible!" before or after uttering (1).

Now consider the following situation. Liz has been known to be rather lazy at school. She is now in her first university year and has done very well in her exams. Her mother may utter (2) in a happy tone of voice, while discussing with her husband Liz's progress:

¹The *na*-clauses I am discussing here are typically uttered with a generally falling intonation with a low to middle rise towards the end. This intonation pattern is one of the clues that help the hearer infer the intended interpretation. Keep in mind that such clauses may have any of the interpretations we saw in the last chapter, if uttered with the appropriate intonation in the appropriate context.

- (2) *na pari toso kalous vathmous*
 na get-3s-PF such good marks
 To get such good marks

Here again the state of affairs described by the *na*-clause is known to exist in the actual world. The speaker utters (2) in order to express her pleasure, even admiration for Liz's achievement and may do so explicitly by following up her utterance with an expression like "Wonderful!".

Such uses of *na*-clauses are often referred to in traditional grammars as "the subjunctive of surprise and disapproval". For example, according to Tzartanos (1945/1989:311), such *na*-clauses are in some sense "exclamative" and they are used in order to express surprise at something which is happening or has happened and which is "unexpected or strange... Such utterances may be expressions of surprise, admiration, anger, sadness, disapproval, criticism, etc."

Can non *na*-clauses be used to express surprise, admiration, disapproval, etc.? Yes. Instead of (1), for example, the speaker could have uttered (3), and instead of (2) she could have uttered (4):

- (3) *pernai oli tou tin ora brosta stin tileorasi. (Fovero!)*
 spend-3rd all his the time in front of the television. (Terrible!)
 He spends all his time in front of the television. (Terrible!)
- (4) *Pire toso kalous vathmous. (Katapliktiko!)*
 got-3s so good marks. (Wonderful!)
 She got such good marks. (Wonderful!)

The overall effect of (1) and (2), on the one hand, and (3) and (4), on the other, is similar but not identical, as you would expect given the semantic contrast between *na*- and non *na*-clauses. Both (1) and (3) communicate in this context the speaker's disappointment and disapproval; both (2) and (4) convey the speaker's pleasure. However, (1) and (2) communicate that the speaker finds the described state of affairs difficult to believe, strange or unexpected in some sense, whereas (3) and (4) do not carry such a suggestion. The speaker is expressing her

disapproval or pleasure towards an event which she presents in a neutral way, as a description of actuality.

A similar use of *na*-clauses is found in narrative contexts. *Na*-clauses may be used in narration instead of non *na*-clauses in the imperfect. Suppose, for example, that Mary is describing a fight her parents had when she was still in elementary school. In the course of her narration she may utter (5):

- (5) Itan enas tromeros kavgas. Na min miliounte dio evdomades. Ti miseria!
Was-3s a terrible fight. Na not talk to each other-3pl two weeks. What misery!
It was a terrible fight. Not to talk to each other for two weeks. How miserable!

Tzartanos (1945/1989:314) refers to such examples as the "narrative subjunctive"; the narrative subjunctive is used, according to him, in the description of events which have already happened and "especially in the expression of emotions". This latter comment is supposed to capture the difference between the *na*-clause in (5) and its non *na*-counterpart in (6):

- (6) Itan enas tromeros kavgas. Den milliontousan dio evdomades. Ti miseria!
Was-3s a terrible fight. Not talked to each other-3pl two weeks. What misery!
It was a terrible fight. They were not talking to each other for two weeks. How miserable!

According to Tzartanos, (5) is characterised by "liveliness and a certain dramatic tone", which (6) lacks.

The difference in meaning between (5) and (6) could be described in a similar way as the difference between (1) and (3), and (2) and (4). Both (5) and (6) succeed in communicating the hearer's negative feelings about the fact that her parents were not talking to each other for two weeks. However, the *na*-clause in (5) carries the additional suggestion, which causes it to have a "dramatic tone", that the speaker regards the state of affairs where her parents were not talking to

each other for two weeks as strange, in some sense unexpected and difficult to believe.

The *na*-clauses in (1), (2) and (5) seem to create a problem for the generalisation I argued for in the last chapter, that is that independent *na*-clauses are standardly interpreted as describing states of affairs in a world other than the actual. These *na*-clauses seem to describe states of affairs which exist in the actual world. On the other hand, there is a clear difference in meaning between such *na*-clauses and their non *na*-counterparts, which may be caused by the semantic contrast between *na*- and non *na*-clauses. Moreover, notice that there is a difference between the *na*-clauses in (1) and (2), on the one hand, and (5) on the other (as well as between the corresponding non *na*-clauses). The speaker utters (1) and (2) in order to inform the hearer of her attitude towards a state of affairs; the speaker of (5) however, seems to utter the *na*-clause in order to inform her hearer both of a particular state of affairs and of her attitude towards it.

Now consider the following example. Suppose you have been telling me how an old friend of yours played a nasty business trick against you. I am appalled by the situation and utter (7) in a disapproving tone of voice:

(7) Na ferthi kata afto ton tropo apenanti se ena filo tou. Ke mono i skepsi me anastatoni!

Na-behave-3s-PF in this the way opposite in a friend his. And only the thought me upset-3s!

To behave in such a way towards a friend. The mere thought upsets me!

As in examples (1) and (2), the speaker utters (7) in order to give way to her emotions: she is disgusted, appalled, upset. So, (7) is another example of what Tzartanos called "the subjunctive of surprise and disapproval". However, as made explicit by the second utterance in (7), in this case the speaker expresses her attitude towards the thought that someone may behave in this way towards a friend, rather than towards the fact that someone did behave in this way.

Instead of (7) the speaker could have uttered (8):

- (8) Ferthike kata afton ton tropo apenanti se ena filo tou. Ke mono i skepsi me anastatoni!

Behaved-3s according this the way opposite in a friend his. And only the thought me upset-3s

He behaved in such a way towards a friend. The mere thought upsets me!

Here the speaker is expressing her attitude towards the thought that someone behaved in a nasty way towards one of his friends. As with the other pairs of *na*- and non *na*-clauses we considered, (7) and (8) differ in that uttering (7) the speaker communicates that she has difficulty believing that such a state of affairs could be the case; i.e. difficulty in accepting its representation as true.

Similar cases where a *na*-clause seems to represent a thought rather than to describe a state of affairs may be found in narrative contexts. For example, suppose you have been telling me about the hardships you had to go through during the war and you utter (9):

- (9) Skepsou mono afto: Na min ehoume gala oute gia to neogenito moro mas.

Think-imp only this: na not have-1pl milk not even for the newly-born baby ours

Just think of this: Not to have milk even for our newly born baby

In this case the speaker explicitly invites the hearer to interpret the *na*-clause as a representation of a thought rather than a description of a state of affairs in a possible world. Once again the speaker could have uttered the non *na*-counterpart in (10):

- (10) Skepsou mono afto: Den ihame gala oute gia to neogenito moro mas.

Think-imp only this: not had-1pl milk not even for the newly-born baby ours

Just think of this: we didn't have milk even for our newly born baby

As with the *na*-clause in (9), the hearer is expected to interpret the non *na*-clause in (10) as a representation of a thought, rather than a description of a state of affairs in the base world. Both (9) and (10) succeed in communicating implicitly the speaker's attitude towards the thought that there was no food for her baby: the

thought was terrifying and upsetting. The difference between (9) and (10) is that (9) sounds more expressive, more "emphatic", more "dramatic"; the speaker communicates that she has difficulty accepting that such a state of affairs could be the case.

The fact that *na*-clauses may be interpreted as representations of propositions rather than descriptions of states of affairs in a possible world requires an explanation. Can it be reconciled with the semantic analysis of *na* I have proposed? According to this analysis, *na* encodes information about a particular kind of descriptive attitude, i.e. a kind of attitude towards a state of affairs. In particular, *na* encodes the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. Or, is *na* ambiguous between two senses, encoding two types of attitude? Does it encode, in addition to a particular kind of descriptive attitude, a kind of interpretive attitude, i.e. an attitude towards a representation? I will argue that *na* is not ambiguous in this way. In the next section I will introduce the relevance theoretic distinction between description and interpretation, and I will then argue that the interpretation of the *na*-clauses in (7) and (9) depends on pragmatically inferring that they are used interpretively. I will then return to the examples in (1), (2) and (5), and reconsider them in the light of this distinction.

3.3. Description, interpretation and the mood indicators

In *Relevance* Sperber and Wilson (1986) draw a distinction between the descriptive and interpretive dimensions of language and thought. This is further explored in Wilson and Sperber (1988b, 1992) and Sperber and Wilson (1981; 1985/6).

An utterance or thought or any other representation with a propositional form is used descriptively when it is used to represent the state of affairs that makes it true. So, for example, an ordinary assertion like (11)

(11) Margaret Thatcher resigned a few years ago

is a truth conditional, i.e. descriptive, representation of a state of affairs.

In addition to the notion of descriptive representation, already familiar from truth conditional semantics, Sperber and Wilson introduce another variety of representation, namely interpretive representation. A thought or utterance can be used to represent another thought or utterance by virtue of a resemblance between the two propositional forms. A propositional form resembles another when they share logical and contextual implications. For example, suppose that you know that Paul called and you ask what he had to say and I answer with (12):

(12) He is happy with his new job

In (12) the speaker is not committed to the truth of the proposition "Paul is happy with his new job"; she is simply reporting what Paul told her on the phone. Her utterance doesn't come with a guarantee of truthfulness (as a Gricean would expect) but rather with the guarantee that it is a faithful enough representation of the original, i.e. that it resembles it closely enough in relevant respects.

According to Sperber and Wilson, two propositional forms interpretively resemble one another to the extent that they share their analytic and contextual implications in a particular context. Interpretive resemblance is a comparative notion. A thought or utterance may be interpretively used to represent another thought or utterance with which it shares all analytic and contextual implications, i.e. their propositional forms are identical. Free indirect speech is a case in point. Suppose Paul actually uttered (13):

(13) I am happy with my new job

In this case the speaker of (12) has reproduced Paul's utterance. (12) and (13) have identical propositional forms and share all their analytic and contextual implications. In Sperber and Wilson's terms, (12) is a literal interpretation of (13).

Alternatively, a thought or utterance may be used to interpretively represent another with which it shares just a proper subset of its analytic and contextual implications in a particular context. Suppose, for example, that what Paul really said was

(14) I am well paid in my new job and my colleagues are nice people

In this case (12) is a less than literal interpretation of (14). In a context, however, in which it is manifest that Paul's main complaints with his old job were that he was not well paid and his colleagues were unfriendly, (12) and (14) would share the relevant analytic and contextual implications. For example, they would both give rise to implicatures such as that Paul may now settle in this job, that he will now stop complaining about his working conditions and may become pleasant company again, that the speaker and the hearer need not worry any more about Paul, etc. So, although (12) is not a literal interpretation of (14) it resembles it closely enough in the relevant respects: in this context it gives rise to the implicatures Paul intended his utterance to yield.

Notice that (12), on both scenarios we considered, achieves relevance by informing the hearer of the (propositional) content of Paul's utterance. Alternatively, as Wilson and Sperber point out, an interpretively used utterance may achieve relevance by informing the hearer that the speaker has in mind what someone said and has a certain attitude to it. Consider, for example, the following dialogue:

(15) Peter: That was a good old Clint Eastwood movie

Mary (happily): A good old Clint Eastwood movie

Mary's utterance is not used descriptively, but rather to represent an utterance it resembles, namely Peter's utterance. By contrast to the cases we have considered so far, Mary's utterance does not achieve relevance by informing Peter of what he just said but rather by giving him some evidence of her attitude towards his utterance, namely that she agrees with what he said. When interpretively used utterances achieve relevance in this way, Sperber and Wilson call them *echoic*. Mary echoes Peter's utterance, i.e. attributes the proposition expressed by her utterance to Peter and expresses an attitude towards it, in this case the attitude of endorsement.

In the examples we have considered so far, an utterance is used to interpretively represent another utterance. An utterance can also be used to interpretively represent a thought. For example,

- (16) a. John saw his father getting out of the car. He looked tired and old, John thought.
b. John saw his father getting out of the car. He looked tired and old.

In (16) the utterance "he looked tired and old" does not represent a thought entertained by the speaker as a description of a state of affairs, but rather it is used to report a thought which the speaker attributes to John, explicitly in (16a) and implicitly in (16b).

At a more fundamental level, Sperber and Wilson claim that every utterance is interpretively used to represent a thought. In other words, the proposition expressed by an utterance is put forward as resembling a thought that the speaker intends to communicate. The next question is whether this thought is itself entertained as a description of a state of affairs or as an interpretation of another thought or utterance. So, the utterance in (11) is an interpretation of the thought it represents, namely that Margaret Thatcher resigned a few years ago, which is entertained by the speaker as a description, i.e. truth conditional representation, of a state of affairs. The utterance in (12), on the other hand, is an interpretation of the thought "Paul is happy with his new job" which is entertained as a more or less literal interpretation of what Paul actually said. We say respectively that (11) is used descriptively and (12) is used interpretively or that it is doubly interpretive.

Interpretive resemblance is the key concept in Sperber and Wilson's account of metaphor and irony. Metaphor is seen as resulting from the speaker's decision to choose an utterance that is a less than literal interpretation of her thought. For example, suppose you utter (17) while telling me about your friend Mary:

- (17) Mary's ego is very fragile

In interpreting this utterance the hearer will infer that it is a less than literal interpretation of the speaker's thought: no rational speaker could have intended to communicate that if you drop Mary's ego it will break. As with all utterances, including literal ones, the speaker intends to communicate only a subset of the analytic and contextual implications of her utterance. However, (17) differs crucially from cases of literal interpretation in that the propositional form itself is not

communicated. Considerations of relevance will help the hearer decide what the speaker intends to communicate implicitly. So, for example, she is likely to be intending to communicate that Mary is very sensitive and easily hurt. To justify the element of indirectness in (17), however, the hearer will infer that the speaker intended to communicate something more than what would have been communicated by saying simply "Mary is very sensitive and easily hurt". So, the hearer is encouraged to explore a variety of other contextual implications having to do with the degree of Mary's sensitivity, her lack of confidence, her social behaviour, the way other people treat her, etc. Such implicatures are weaker than the one mentioned earlier and the hearer takes a greater degree of responsibility in deriving them. It is the communication of this range of weak implicatures that makes the utterance the best possible way of representing the speaker's thoughts. (For a more detailed account of metaphor within relevance theory see Sperber and Wilson 1986: 231-237 and Wilson and Sperber 1988b: 142-145).

Verbal irony, on the other hand, arises when the proposition expressed by an utterance represents a belief attributed by the speaker to someone else and implicitly expresses the speaker's attitude of dissociation towards the belief represented. So, consider the following dialogue:

- (18) Peter: I'm so happy there is a Clint Eastwood movie tonight
Mary (contemptuously): I'm so happy there is a Clint Eastwood movie tonight

Peter is expected to infer that Mary is attributing the proposition expressed by her utterance to him and implicitly dissociates herself from it. She is, in this way, implicating that she is not happy that there is a Clint Eastwood movie tonight, that she would prefer to watch something else, that she doesn't think very highly of people who like Clint Eastwood, etc. This interpretation satisfies the criterion of consistency with the principle of relevance and is therefore the one the hearer should choose. (For a detailed account of irony within relevance theory see Sperber and Wilson 1986: 237-243; Wilson and Sperber 1988b: 145-147, Wilson and Sperber 1992).

The information that an utterance is to be interpreted as a second degree interpretive representation may be pragmatically inferred, as in the case of irony,

or it may be linguistically encoded. For example, Blass (1989) argues that the particle *ré* in Sissala is a marker of echoic interpretive use. More interestingly for the purposes of this thesis, Wilson and Sperber (1986: 243-254; 1988a,b) have argued that interrogative and exclamative sentences encode the information that they represent a thought which itself interpretively represents another thought.

Both interrogatives and exclamatives are analysed as second degree interpretations of desirable thoughts. A thought is desirable if it is relevant, i.e. if it yields enough effects to be worth the individual's attention. Yes-no and wh-interrogatives encode the information that they are interpretively used to represent thoughts which the speaker considers relevant from someone's point of view. Which thoughts? Their answers. For example, consider the interrogatives in (19):

- (19) a. Where is the orange-juice?
b. Is John in?

(19a), like all wh-questions, does not express a complete proposition but only an incomplete logical form. The speaker uses this incomplete logical form to indicate that she would like to entertain a complete proposition that it resembles, i.e. the proposition which results from the completion of the incomplete logical form. So, the speaker indicates that she would regard some completion of the logical form of her question as relevant. (19b), in a similar way, expresses a complete proposition which resembles what the speaker regards as a relevant answer.

There is an indeterminacy in the semantics of interrogatives: from whose point of view does the speaker represent the answer to the question as being desirable? This indeterminacy is to be resolved pragmatically on each occasion. For example, with questions which are understood as requests for information and with self-addressed questions, the indeterminacy is resolved in favour of the speaker, who regards the answer to her question as relevant to herself. For example, suppose I want some cream on my cake and I ask you:

- (20) Do we have any cream left?

The answer to this question is regarded by the speaker as relevant from her own point of view. Moreover, it is manifest from the context that I do not know the

answer, that I believe you do, and that I address my question to you. Such contextual assumptions will lead the hearer to understand (20) as a request for information and encourage him to provide the speaker with an answer if he can. Alternatively, if I uttered (20) when I was on my own eating some cake, then I would still be representing the answer as relevant to myself, but my question would be understood as a self-addressed question.²

On the other hand, with questions which are understood as offers of information and rhetorical questions, the speaker represents the answer to her question as relevant to the hearer. Consider for example (21a) where the speaker is typically understood as offering information to the hearer, and the rhetorical question in (21b) which achieves relevance by reminding the hearer of a piece of information he has apparently forgotten:

- (21) a. What are the points I've argued for so far? Representation by
resemblance is...
b. What do you say when you get a present?

Further contextual assumptions will help the hearer to interpret (21a) as an offer of information, and (21b) as a rhetorical question. For (21a) to be interpreted as an offer of information, the hearer has to infer that the speaker already knows the answer to her question. For (21b) to be understood as a rhetorical question, it has to be manifest in the context that both speaker and hearer know the answer (although the hearer had momentarily forgotten it).

Exclamatives, like for example (22),

- (22) How full this room is!

encode the information that they are second degree interpretations of relevant thoughts which are already available to the speaker and which the speaker regards as relevant to herself (Wilson and Sperber 1988b, Clark 1991). The speaker of (22) expresses an incomplete logical form and indicates that she would regard some

²It is not clear to me whether self-addressed questions, and, in general, cases where there is no hearer, are cases of ostensive-inferential communication. Here, I will assume that they are genuine cases of ostensive-inferential communication, although I think that this is an interesting issue requiring further consideration.

already available completion of it as relevant to herself. So, the speaker of (22) is indicating that this room is so full that it is worth noticing, that she is surprised that the room is so full, etc.

Within the relevance theoretic framework, interrogatives and exclamatives, like other mood indicators, are seen as encoding information about propositional attitude. Moreover, their meaning is analysed in procedural rather than conceptual terms. In particular, the information encoded by interrogatives and exclamatives is analysed as a constraint on the higher level explicatures of the utterance. Like imperatives and declaratives, interrogatives and exclamatives constrain the interpretation process by instructing the hearer to construct a higher level explicature involving one type of attitude rather than another. The difference is that, while declaratives and imperatives express descriptive attitudes, i.e. attitudes towards states of affairs, interrogatives and exclamatives express interpretive attitudes, i.e. attitudes towards propositions.

3.4. *Na*-clauses and interpretive use

On the basis of examples like (7) and (9), repeated below, where the *na*-clause seems to represent a proposition (a thought) rather than a state of affairs,

- (7) *na ferthi kata afto ton tropo apenanti se ena filo tou. Ke mono i skepsi me anastatoni!*

na-behave-3s-PF in this the way opposite in a friend his. And only the thought me upset-3s

To behave in such a way towards a friend. The mere thought upsets me.

- (9) *Skepsou mono afto: Na min ehoume gala oute gia to neogenito moro mas. Think-imp only this: na not have-1pl milk not even for the newly-born baby ours*

Just think this: Not to have milk even for our newly born baby

one may wonder whether *na*-clauses encode the information that they represent a thought which itself interpretively represents another thought. I want to argue that

this idea is not on the right track. To accept it, we would either have to reject the semantics I argued for in the earlier chapters, or we would have to claim that *na*-clauses are ambiguous. If we assume that *na*-clauses encode interpretive use, then we cannot account for any of the interpretations of *na*-clauses I discussed in chapter 2. As far as I can see, there is no way to reconcile such a semantics with the imperative-, hortative-, and optative-like interpretations of *na*-clauses. On the other hand, Modified Occam's Razor suggests that we should stipulate a semantic ambiguity only in those cases where we cannot account pragmatically for the apparently diverse meanings of a linguistic device. I will argue that there is no need to postulate an ambiguity and that the interpretation of the *na*-clauses in (7) and (9) can be accounted for in pragmatic terms.

I have presented in the previous chapters ample evidence that *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. In chapter 1 I considered a variety of examples which suggest this semantics, and in chapter 2 I argued that, on the basis of this semantics and an adequate theory of utterance interpretation, we can give a psychologically plausible account of several interpretations independent *na*-clauses may have. Let me point out again a few examples where it would not make sense to claim that *na*-clauses encode interpretive use:

- (23) a. Akoma na erthi to leoforio
yet na come-3s-PF the bus
The bus is yet to come
- b. Paraligo na pnigoume
almost/nearly na drown-1pl-PF
We nearly drowned
- c. Isos na erthi
perhaps na come-3s-PF
Perhaps he may come

In (23a) the *na*-clause represents a state of affairs which does not hold yet; in (23b) the *na*-clause represents a state of affairs which was close to becoming

actual (but did not happen); in (23c) the *na*-clause represents a state of affairs which may happen. All these interpretations can only be explained on the assumption that *na*-clauses are in some sense descriptions of states of affairs in possible worlds.

Convincing evidence comes also from the following examples:

(24) a. O Kostas varethike na perimeni
The Kostas is bored-3s na wait-3s-IPF
Kostas is bored with waiting

b. Ton ekana na hasi to treno
him made-1s na miss-3s-PF the train
I made/caused him miss the train

c. I Maria arhise na milai
The Maria began-3s na speak-3s-IPF
Mary began to speak

d. Sinehizi na vrehi
continues-3s na rain-3s-IPF
It continues to rain

In (24a) Kostas is not bored with entertaining the thought of waiting but with actually waiting. In (24b) the speaker did not make the hearer entertain the thought of missing the train, she made him miss the train. In (24c) Mary did not start entertaining the thought of speaking; she started speaking. Finally, in (24d) there is not even a conceivable way of understanding the *na*-clause as representing a thought rather than a state of affairs.

So, there is no reason, a priori, to think that *na* is a marker of (some type of) interpretive use. However, we would expect that, like all linguistic expressions, a *na*-clause may be used to represent a thought that merely resembles it in propositional form, as is the case with metaphor, and it may, further, be doubly interpretive, in that it involves the attribution of a thought or utterance, as is the

case with ironical and other echoic utterances. If this is true, then it is very likely that, to interpret the *na*-clauses in (7) and (9), all the hearer has to do is to pragmatically infer that they are used to represent thoughts which are entertained as interpretive representations of other thoughts.

As expected, *na*-clauses may be used metaphorically. For example, consider (25):

- (25) Makari na anthisi i agapi sas
Wish-particle na bloom-3s-PF the love yours
May your love blossom

Here the speaker commits herself to only a subset of the analytic and contextual implications of her utterance and not to the propositional form itself: she communicates, for example, that she hopes their love develops in a beautiful way, reaches a peak, is productive, etc. She does not commit herself to other implications, such as that their love has the shape and the colours of a flower, etc. Considerations of relevance help the hearer decide which are the implications the speaker intends to communicate.

Na-clauses may also be used to report what someone else said or thought. For example, suppose Mary has been to see her doctor about some stomach problems she had, and Peter wants to know what the doctor said. Then Mary may very well utter the *na*-clause in (26):

- (26) Na apofevgo ta lipara
na-avoid-1s the fat food
I should avoid fat food

In this context Mary's utterance is not to be interpreted as a description of a state of affairs in a possible world. The first interpretation that comes to mind and is worth the hearer's attention is that Mary's utterance is a more or less faithful representation of what the doctor said.

Suppose, moreover, that Mary utters (26) in an approving tone of voice; imagine, for example, that she had already guessed that it was fat food that was causing her problems. In this context (26) would achieve relevance by informing

Peter not only of what the doctor said, but also of Mary's attitude towards that, i.e. that Mary endorses the doctor's opinion. In this case the *na*-clause in (26) is being used echoically.

Na-clauses may also be ironical. For example, suppose Peter has expressed his desire to see the Clint Eastwood movie and Mary, who hates Clint Eastwood, utters (27) in a sarcastic tone of voice:

- (27) Na doume to film me ton Clint Eastwood
na watch-1pl-PF the film with the Clint Eastwood
Let's watch the movie with Clint Eastwood

Here Mary attributes to Peter the thought that it is desirable and potential to watch the film with Clint Eastwood and implicitly dissociates herself from it. In this way she is implicating that she does not want to watch this movie, that Peter's taste in films is not good, etc. This is the most easily accessible interpretation which gives rise to an adequate range of effects, and therefore this is the interpretation the hearer should choose.

This analysis extends easily to threats and dares like (28) and (29):

- (28) Na adiaforis/adiaforise gia to nomo (ke tha ipoferis)
na ignore-2s-IPF/ignore-imp-PF the law (and will suffer-2s
Ignore the law (and you'll suffer)
- (29) Ebros, na to katastrepsis/katastrepse to kenourjio mou hali
go on, na it destroy-2s-PF/destroy-imp-PF the new mine carpet
Go on, destroy my new carpet

It was mentioned in chapter 2, section 2.3.3, that such examples may seem problematic for the Wilson and Sperber semantic account of imperatives, as well as for my account of *na*-clauses used instead of imperatives. The problem is that, when such utterances are uttered threateningly, the speaker does not commit herself in regarding the described state of affairs as desirable from anyone's point of view. This problem, however, disappears when we realise that such imperatives and such *na*-clauses are being interpretively used: the speaker is attributing to the

hearer the thought that the described state of affairs is desirable and potential. (28) will typically be uttered threateningly in a context where the hearer has ignored the law or is considering ignoring the law. In this context we may informally paraphrase (28) as: "You are thinking (may be thinking) that it is desirable and potential to ignore the law". In the same vein, (29) will be typically uttered in a context where the hearer has behaved in a way consistent with the propositions (29) makes manifest, for example he has threatened to spill red wine on the carpet. In this context we may informally paraphrase (29) with "You think (You may be thinking) that it is desirable and potential that you destroy my carpet". What makes these utterances threats is the communication of the undesirable consequences of the realisation of the described state of affairs for the hearer. In (28) these negative effects are explicitly represented in the following declarative, whereas in (29) they are left implicit. (For a detailed account of imperatives used to issue threats and dares and pseudo-imperatives, such as (28), see Clark 1993a: 104-106).

In (28) and (29) the *na*-clause is used to express a thought which is itself entertained as an interpretation of a possible (or potential) thought that the speaker attributes to the hearer. I want to suggest that in the examples in (7) and (9) the *na*-clause is used to express a thought which is itself entertained as an interpretation of a thought of the speaker's.

Sperber and Wilson (1986: 229) discuss cases where the speaker utters *P* to represent a thought which itself interpretively represents another thought without attributing it to anyone. A typical case is when the speaker asks the hearer to consider an assumption. For example, suppose I ask you to consider the assumption in (30):

(30) If I were not Greek, I would be Chinese

According to Sperber and Wilson, I have just used an utterance interpretively to represent an assumption without attributing this assumption to anyone. Another case, Sperber and Wilson mention, is speculative thinking, where thoughts may be entertained as approximate representations of assumptions one would like to be able to formulate better. For example, in trying to think of a new hypothesis which will account better for the data you are analysing, you are bound to entertain

incomplete hypotheses as representations of the hypothesis you ultimately want to construct.

The type of interpretive use involved in the interpretation of the *na*-clauses in (7) and (9) is similar to these cases, in that the speaker does not attribute the interpretively represented thought to someone else. It differs from these cases in that the speaker has a particular attitude towards this thought and intends to inform the hearer of her attitude towards the represented thought.

In the context given for (7) the speaker has been given an account of how badly someone, let us say John, treated one of his friends. So, she holds a bunch of thoughts which describe that state of affairs, one of which is that John behaved badly towards a friend. In uttering (7), she is considering an implication of that very thought, namely the thought that the state of affairs in which John treats one of his friends badly is possible (i.e. exists in some possible world). So, we might informally paraphrase the *na*-clause in (7) with "I am entertaining the thought that the state of affairs in which John behaves in a nasty way towards one of his friends is possible". With her next utterance the speaker goes on to explicitly express her attitude towards this thought: she finds it upsetting. (9) is interpreted along similar lines. The speaker is telling the story of their life during the war. She holds a number of thoughts which are entertained as descriptions of what was going on during that time. One of them is that they didn't have milk for the baby. One of the implications of this thought is the thought that the state of affairs in which they didn't have milk for their newly born baby exists in some possible world. Uttering (9), the speaker is thinking about this thought. So, we might informally paraphrase the *na*-clause in (9) with "I am entertaining the thought that the state of affairs in which we didn't have milk for our newly born baby was possible".³ In this case the speaker leaves it up to the hearer to infer her attitude towards the described state of affairs. In this context, and after the speaker's explicit instruction to the hearer in her first utterance to consider the represented thought, the hearer is likely to infer that the speaker considers this thought appalling and upsetting.

The examples in (8) and (10) repeated below are interpreted in a similar way:

³The *na*-clause in (8) is not marked for past tense. The hearer will infer on the basis of the fact that (8) is part of a narration of past events that the described state of affairs took place in the past. See also section 3.5.

(8) Ferthike kata afton ton tropo apenanti se ena filo tou. Ke mono i skepsi me anastatoni!

Behaved-3s according this the way opposite in a friend his. And only the thought me upset-3s

He behaved in such a way towards a friend. The mere thought upsets me!

(10) Skepsou mono afto: Den ihame gala oute gia to neogenito moro mas.

Think-imp only this: not had-1pl milk not even for the newly-born baby ours

Just think this: we didn't have milk even for our newly born baby

The corresponding non *na*-clauses are used to represent a thought which is itself entertained as an interpretation of a thought of the speaker's. (8) and (10) differ from (7) and (9) in that that thought is entertained as a description of a state of affairs in the base world, which in these cases is the actual world. So, a paraphrase for (8) would be something like "I am entertaining the thought that he behaved in such a way towards one of his friends"; and (10) could be paraphrased in the following way: "I am entertaining the thought that we did not have milk for our newly born baby". As before, the speaker intends to inform the hearer of her attitude towards these thoughts and does so explicitly in (8) and implicitly in (10).

I have shown in this section that the fact that in examples like (7) and (9) a *na*-clause may be used to represent a thought rather than to describe a state of affairs in a possible world is an instance of a much broader phenomenon: Any representation (utterance or thought) may be used to represent another representation by virtue of resembling it. There is no reason to assume that *na*-clauses are semantically specialised for the representation of utterances or thoughts. To interpret utterances such as (7)-(10), the hearer has to infer on the basis of context and considerations of optimal relevance that they are being used interpretively.

3.5. *Na*-clauses and the expression of emotions

I now want to consider again the *na*-clauses in (1), (2) and (5), repeated below:

- (1) Na pernai oli tou tin ora brosta stin tileorasi.
na spend-3s-IPF all his the time in front of the television.
To spend all his time in front of the television.
- (2) na pari toso kalous vathmous.
na get-3s-PF such good marks.
To get such good marks.
- (5) Itan enas tromeros kavgas. Na min miliounte dio evdomades. Ti miseria!
Was-3s a terrible fight. Na not talk to each other-3pl two weeks. What misery!
It was a terrible fight. Not to talk to each other for two weeks. How miserable!

As I explained in section 3.2., these *na*-clauses may seem problematic for the account I proposed of the interpretation of *na*-clauses in chapter 2, since the state of affairs described by the *na*-clause is actual rather than simply possible. How could we account for such examples? There is a range of possibilities. Is this another case of enrichment, where the semantics of the *na*-clause is strengthened from "possible world" to "actual world"? Does the interpretation of such examples involve interpretive use? Or, are such utterances interpreted in a slightly different way?

I want to start by arguing that the interpretation of such examples does not involve enriching the semantics of the *na*-clause from "possible world" into "actual world". I will first consider (1) and (2).

To begin with, an enrichment-based analysis is counterintuitive. Intuitively the speaker does not intend to say in (1) and (2) that the described state of affairs is actual. Second on this analysis, (1) and its non *na*-counterpart in (3), on the one hand, and (2) and its non *na*-counterpart in (4), on the other, would communicate identical higher level explicatures.

- (3) pernai oli tou tin ora brosta stin tileorasi. (Fovero!)
 spend-3rd all his the time in front of the television. (Terrible!)
 He spends all his time in front of the television. (Terrible!)
- (4) Pire toso kalous vathmous. (Katapliktiko!)
 got-3s so good marks. (Wonderful!)
 She got such good marks. (Wonderful!)

(1) and (3) would communicate the higher level explicature "I disapprove of the fact that Peter spends all his time in front of the TV", and (2) and (4) would communicate the higher level explicature "I am pleasantly surprised with the fact that Liz got such good marks". This, however, does not account for the difference in meaning between the *na*-clauses and their non *na*-counterparts. (1) and (2) communicate an extra piece of information about the intended propositional attitude: that the described state of affairs is in some sense unexpected, strange, difficult to believe. Notice that we could not justify the enrichment analysis by claiming that this extra bit of meaning is a by-product of the enrichment process; in other words, that the logical form of the utterance has to be enriched for this extra bit of meaning to be communicated. The reason is that the hearer is likely to infer that the speaker regards the described state of affairs strange or unexpected simply by realising that there is a mismatch between what the speaker says, namely that the described state of affairs is possible, and the highly salient contextual assumption shared by both interlocutors that this state of affairs is in fact actual.

I want to suggest that these *na*-clauses are similar to the *na*-clauses in (31), the interpretation of which was discussed in chapter 2, section 2.3.6.:

- (31) a. Paraligo na pnigi
 Almost na drown-3s-IPF
 He almost drowned
- b. Akoma na erthi to leoforio
 yet na come-3s the bus
 The bus hasn't come yet

(31a) and (31b) communicate that the speaker believes that the described state of affairs exists in a (merely) possible world.

Let me start with (2). The speaker knows that Liz got very good marks in her exams. It follows from this that it is possible for Liz to get very good marks. Now, processing (2) the hearer will recover partly by decoding and partly by inference a higher level explicature like (32):

(32) The speaker is surprised that it is possible for Liz to get such good marks

(or more formally "The speaker is surprised that the state of affairs in which Liz got very good marks exists in a possible world"). The hearer will not go on to infer that this state of affairs holds in the actual world. If this was what the speaker intended to communicate, then she would have uttered the non *na*-clause in (4), thus saving the hearer some processing effort. Uttered in the same context, (4) communicates a higher level explicature like (33):

(33) The speaker is surprised that Liz got such good marks

On this view, (2) and (4) differ with regard to the higher level explicatures they communicate. In (4) the speaker intends to communicate explicitly that she is surprised that Liz got good marks, whereas in (2) she intends to communicate explicitly that she is surprised that it is even possible for Liz to get such good marks. (32) is stronger, i.e. communicates more, than (33), because (32) suggests or makes accessible the assumption that the speaker did not believe it was even possible for Liz to get such good marks. This is why (1) carries the suggestion that the speaker finds the described state of affairs in some sense strange, that she cannot quite believe it (although she knows it is actual): she has difficulties accepting it because she did not believe it to be possible. By contrast, in (4) the speaker is simply expressing her surprise towards an actual state of affairs.

Of course, on the basis of (32) and the contextual assumption that Liz did indeed get good marks, the hearer processing (2) is very likely to infer that the speaker is surprised that Liz did indeed get such good marks. So, (2) gives rise to all the contextual effects that (4) yields, plus the implication that the speaker did not think it was even possible for Liz to get very good marks.

(1) is interpreted along similar lines. In the context given earlier for (1) it is manifest to both speaker and hearer that the state of affairs in which Peter spends all his time in front of the TV exists in the actual world. One of the logical implications of this proposition is that the state of affairs in which Peter spends all his time in front of the TV exists in a possible world. Processing (1), the hearer will recover partly by decoding and partly by inference a higher level explicature like "the speaker disapproves of the fact that the state of affairs in which Peter spends all his time in front of the TV exists in a possible world". The hearer will not go on to infer that the described state of affairs is actual. If this was the interpretation the speaker intended, she would have used a non *na*-clause, as in (3), thus saving the hearer some processing effort. On this account, (1) and (3) communicate different higher level explicatures, which we might informally represent as in (34) and (35):

(34) I disapprove of the fact that it is even possible for Peter to spend all his time in front of the television

(35) I disapprove of the fact that Peter spends all his time in front of the television

By communicating the higher level explicature in (34), the *na*-clause in (1) makes accessible the assumption that the speaker did not regard the state of affairs in which Peter spends all his time in front of the TV as possible. The fact that it is indeed possible is in conflict with her beliefs and assumptions about the world. Hence, the difference in meaning between (1) and (3). The non *na*-clause does not give rise to any such implication. Uttering (3), the speaker intends to inform the hearer of her attitude towards a state of affairs which they both know to exist in the actual world.

Again, on the basis of (34) and the contextual assumption that Peter does indeed spend all his time in front of the TV, the hearer will infer in processing (1) that the speaker disapproves of Peter's life style. So, (1) gives rise to all the effects that (3) gives rise to, plus the implication that the speaker did not expect Peter to behave in this way.

So, the interpretation of *na*-clauses like those in (1) and (2) does not involve enriching the semantics of *na*-clauses from "possible world" into "actual

world". Moreover, such *na*-clauses differ from those I looked at in chapter 1 in that the higher level explicature has two levels of embedding: the proposition expressed is embedded under the propositional attitude description "it is possible" as indicated by the *na*-clause, and that higher level proposition is embedded under a propositional attitude description like "the speaker is surprised/disapproves" which is derived inferentially.

If this analysis is correct, there is no need to assume that the interpretation of such examples involves interpretive use. Is an interpretive use based analysis even conceivable? Well, I could think of two analyses of such examples involving interpretive use. One could explore the possibility that the utterances in (1)-(4) are exclamatives, and that they thereby indicate that the proposition expressed represents a thought entertained as an interpretation of a thought the speaker considers relevant from her own point of view. However, although such utterances have an exclamative feel, there is no syntactic evidence that they are exclamatives. Another possibility to explore would be that the proposition expressed by such utterances (echoically) represents a thought which is itself entertained as an interpretation of a thought of the speaker's. In this case, (1)-(4) would be seen to be similar to (7)-(10). Again, I think that this is not the most suitable analysis of (1)-(4) taking into consideration the contexts in which they are uttered. It's quite clear in the contexts in which (1) and (2) are uttered that the *na*-clause is used to represent a thought which is entertained as a description of a state of affairs in a possible world. Similar considerations hold for the non *na*-clauses in (3) and (4): they are used to represent a thought entertained as a description of a state of affairs in the base world (which is to be understood in these cases as the actual world).⁴

⁴There may be some difficulty in applying the theoretical distinction between a thought entertained as a representation of another thought and a thought entertained as a description of a state of affairs in a possible world in analysing certain cases extracted from particular contexts. However, in real-life conversations the context and considerations of optimal relevance will help the hearer decide which of the two interpretations is intended. So, for example, interpreting (7) the hearer may first take the *na*-clause to express a thought entertained as a description of a state of affairs in a possible world. Once he processes the second clause, however, the hearer will have to "pragmatically reanalyse" the *na*-clause as expressing a thought entertained as an interpretive representation of another thought.

Finally, I want to discuss the interpretation of (5). The speaker utters (5) while narrating an incident from her childhood. So, (5) differs from (1) and (2) in that the state of affairs described is not already known to the hearer to exist or to have existed in the actual world. Does that mean that the hearer is expected to enrich the semantics of the *na*-clause from "possible world" into "actual world"? No. If the speaker intended to communicate that she regarded the described state of affairs as actual, she would have uttered (6), thus saving the hearer some processing effort:

- (6) Itan enas tromeros kavgas. Den miliontousan dio evdomades. Ti miseria!
Was-3s a terrible fight. Not talked to each other-3pl two weeks. What misery!
It was a terrible fight. They were not talking to each other for two weeks.
How miserable!

Processing (5) the hearer will infer, partly by decoding and partly by inference, the higher level explicature in (36):

- (36) The speaker is appalled that it was even possible for her parents not to talk to each other for two weeks

This proposition makes accessible the contextual assumption that the speaker had not expected her parents to treat one another in this way. She did not believe this was possible and she therefore finds it difficult to accept. Hence, the "dramatic tone". By contrast, (6) gives rise to the higher level explicature in (37):

- (37) The speaker is appalled with the fact that her parents were not talking to each other for two weeks

and does not carry such a suggestion. The hearer processing (5) is of course expected to realise that the speaker's parents did indeed behave in this way. However, this is not part of what (5) communicates explicitly but rather follows independently from the contextual assumption that the speaker is narrating past

events. In this way we can account for the difference in meaning between (5) and (6).⁵

So far, I have discussed *na*-clauses with imperative-, hortative- and optative-like interpretations, *na*-clauses expressing potentiality and possibility, *na*-clauses used to represent thoughts rather states of affairs and *na*-clauses expressing emotions. The context and considerations of optimal relevance help the hearer decide which of these interpretations the speaker had in mind. All the *na*-clauses we have considered so far are declaratives. Their interpretation is partly the result of the semantics of declarative syntax and the *na*-verb form and partly the result of pragmatic considerations. In what follows I want to look at *na*-interrogatives, i.e. main clause interrogatives with the *na*-verb form. Such *na*-interrogatives will be shown to be the interrogative counterpart of the types of *na*-clauses we have already discussed.

3.6. *Na*-interrogatives⁶

3.6.1. The data and a possible classification

Pavlidou (1991) discusses subjunctive interrogatives, i.e. independent interrogative clauses where the main verb is preceded by *na* and offers a classification/typology of questions that can be performed with *na*-interrogatives. These questions fall into two main categories:

(a) *Indirect speech acts*: These can be indirect requests for permission to do something, as in (38), and indirect proposals or offers, as in (39):

⁵This account of narrative *na*-clauses and their non *na*-counterparts should be placed within a general theory of narration. A full account, for example, should make mention of the role of different tenses in narration (Smith 1990).

⁶I first proposed a relevance theoretic account of *na*-interrogatives in Rouchota (1993) and Rouchota (to appear, b).

(38) na rotiso kati?
 na ask-1s-PF something?
 Can I ask something? (from Pavlidou 1991: 16)

(39) na plino ego ta piata?
 na wash-1s-PF the dishes
 Shall I do the dishes? (from Pavlidou 1991: 17)

Indirect requests for permission and indirect proposals are yes-no questions.

Pavlidou places rhetorical questions with *na*-clauses in this category as well, presumably because they seem to indirectly convey negative assertions. For example:

(40) Mrs. Anna: Me ksehase o Petros
 me forgot-3s Peter
 Peter forgot me
 Mary: O Petros na se ksehasi, kiria Anna?
 The Peter na you forget-3s-PF, Mrs. Anna?
 Peter forget you, Mrs Anna?

Mary's utterance strongly implies that Peter could/would not forget Mrs Anna. I will discuss *na*-rhetorical questions in detail in section 3.6.4.

(b) *Questions that are posed rather than being asked of someone:* These are deliberative and dubitative questions, as in (41) and (42):

(41) na pao sinema (i ohi)?
 na go-1s-PF to the movies (or not)?
 To go to the movies or not to go?
 (adapted from Pavlidou 1991: 18)

(42) pu na troi i Maria?
 where na eat-3s-IPF the Mary?
 Where might Mary eat/be eating?
 (adapted from Pavlidou 1991: 20)

Deliberative questions can be yes-no or wh-interrogatives (except for why-interrogatives); dubitative questions may be yes-no and wh-interrogatives.

In addition to this classification, Pavlidou suggests a set of explicit criteria for distinguishing the different types of *na*-interrogatives. Besides intonation (which she does not discuss), the various question types differ from one another along the following dimensions:

- (a) *person of reference* in the reference act (speaker, addressee, a third party),
- (b) *type of predication* (act, state, event),
- (c) *beneficiary* of the act mentioned with the predication act (speaker, addressee),
- (d) *attitude* of speaker towards the propositional content,
- (e) the question's *position* in the discourse (initiating question, echo question),
- (f) the *combinability* of the question with other illocutionary force indicators or *paraphrasability* to other typical forms.

For example, for *na*-interrogatives which perform indirect requests for permission as in (38) we get the following description/definition on the basis of the factors in (a)-(f) above:

- (a) The person referred to has to be the speaker or in some cases a third party (eg. *na rotisi kati i Maria?* = Can Mary ask something?, but the subject cannot be in the second person).
- (b) The predication concerns a future act of the speaker.
- (c) The act mentioned has to be in the interest of the referent (i.e. the speaker or a third party).
- (d) The attitude of the speaker is his or her wish or desire to perform the act mentioned.
- (e) The question presupposes at least a non verbal context between speaker and addressee, i.e. such questions are typically continuation moves in a sequence.
- (f) Questions like (1) readily combine with typical markers of requesting like *parakalo*, 'please', and *ligo*, 'a little'.

The general problem with typologies of the sort proposed by Pavlidou (1991) is that they amount to a simple list of the possible interpretations *na*-

interrogatives may have. They do not say anything about how these interpretations are actually arrived at by hearers. It is from this point of view that I want to look at these data.

The classification that Pavlidou proposes should not lead one to believe that she takes *na*-interrogatives to be multiply ambiguous. She assumes a univocal semantics for *na*-clauses in terms of possible worlds, as proposed in Philippaki-Warbuton and Veloudis (1984) and Veloudis and Philippaki-Warbuton (1983). Her views on the semantics of interrogatives, on the other hand, are not explicit but she probably takes them to be directive speech acts. The question she does not address is "how can one explain the several different interpretations of *na*-interrogatives?". I will argue that a psychologically plausible explanation can be given for the several interpretations of *na*-interrogatives if (a) we assume the semantics of *na*-clauses proposed in chapter 1, (b) we assume the semantic account of interrogatives proposed by Wilson and Sperber (1988a) and discussed in section 3.3., and (c) use relevance theory as our theory of utterance interpretation. Moreover, I will show that a typology, like the one proposed by Pavlidou, plays no role in the way a hearer interprets a *na*-interrogative. We do not need to posit categories of questions in order to account for their interpretation.

The other issue that I want to discuss is the differences between *na*- and non *na*-interrogatives. Some types of questions, such as indirect requests for permissions and indirect proposals like (38) and (39), can be performed with *na*-interrogatives only. Real questions, on the other hand, that is questions seeking information about the world (Pavlidou 1987) can be asked with non *na*-interrogatives only. As Pavlidou (1991:37) puts it: "It is evident from this typology that in using subjunctive interrogatives one does not neutrally seek information about the world as is the case with 'real' questions". The questions that arise here are: Why can't "real" questions be asked with *na*-clauses? And, why can't we use a non *na*-interrogative to ask a question which functions as an indirect request or proposal? I will argue that such restrictions as to what type of question may be asked with a *na*- or a non *na*-interrogative follow from the semantic contrast between *na*- and non *na*-clauses.

On the other hand, some of the types of questions that can be performed by *na*-interrogatives can also be performed by non *na*-interrogatives. For example, dubitative questions:

- (43) pu tri arage?
where eat-3s perhaps?
Where does he perhaps eat?

The question here is this: Are there any differences between *na*- and non *na*-dubitative questions and, if so, of what sort and how do we account for them?

Finally, I want to discuss briefly the status of the criteria that Pavlidou proposes in order to distinguish between the different types of *na*-interrogatives. I will argue that, as they stand, these criteria are nothing but simple descriptive statements about each type of question. Looking at these criteria from the point of view of how *na*-interrogatives are interpreted on particular occasions one may wonder whether they are all of equal importance. I will show that some of them are of little or no importance and that others are integral parts of the interpretation process and therefore do not need to be stipulated as distinct entities in our analysis. Viewed as such, they do not constitute descriptive distinguishing criteria but important aspects of the overall interpretation of *na*-interrogatives as driven by considerations of optimal relevance.

3.6.2. A relevance-theoretic account of *na*-interrogatives

According to Wilson and Sperber (1988a), interrogatives encode the information that the proposition expressed represents a thought which is entertained as an interpretive representation of a desirable, i.e. relevant, thought. That thought is, obviously, an answer to the question. So, a speaker uttering an interrogative indicates that she regards the answer to her question as relevant from someone's point of view. Interrogatives in English have distinct word order from declaratives. As I argued in chapter 2, in MG interrogative syntax is not marked by a particular word order. A particular intonation contour, high rise with an optional fall towards the end of a sentence, is the only surface marker of yes-no interrogatives. As I argued in chapter 2, we can establish, on the basis of evidence from tests bearing on the behaviour of polarity items and the expression "or not", that sentences with this particular intonation have underlyingly interrogative syntax. If there is a one to one correlation between this intonation contour and interrogative syntax, then we

may claim that in MG such intonation encodes the information that is encoded in English by interrogative word order. If there is no such correlation, then the hearer has to decide on the basis of the context and considerations of optimal relevance whether a given utterance is to be interpreted as a question. In this case, the information encoded in English by interrogative word order would have to be pragmatically inferred in MG. Here, I will assume that with respect to yes-no interrogatives in MG rising intonation with an optional slight fall at the end encodes the information carried by interrogative word order in English. This does not seem unreasonable to me given the existence of *wh*-interrogatives in MG (for arguments see chapter 2), as well as the fact that there is syntactic evidence that such sentences are interrogatives. The *na*- and non *na*-questions that I will be discussing in the remainder of this chapter are, on the basis of the tests discussed in chapter 2, interrogatives and are uttered with a rising intonation optionally followed by a fall, unless otherwise specified.⁷

According to the relevance-theoretic account of interrogatives, the interrogative in (38) encodes the information that it interpretively represents its answer:

- (38) *na rotiso kati?*
 na ask-1s-PF something?
 Can I ask something?

The important thing to note here is that the typical answer to this question is a *na*-clause:

⁷There is an extra complication here relating to whether we can say at all that particular intonation contours encode meaning. The issue is whether intonational meaning is arbitrary (i.e. encoded, in the way that words encode meaning) or iconic (i.e. whether intonation provides evidence for the communication of some information, in the way that gestures or facial expressions do). This issue is discussed in detail in Lindsey (1985, 1991) who argues that intonational meanings are neither purely iconic nor purely grammatical. Following Lindsey (1985), Clark and Lindsey (1990) propose a theory which accounts for both the arbitrary and the iconic aspects of intonational meaning. Here, I follow Clark (1991: 188-194) in assuming that intonational interpretation can be seen as internal to the language module: in particular, intonation contours may encode procedural meaning.

- (44) Na rotisis kati
na ask-2s-PF something
You may ask something

I argued in chapter 2 that in (44) we have an imperative-like *na*-clause: the speaker is issuing permission to the hearer to ask something. As I argued there, this interpretation is reached by (a) pragmatically enriching the semantics of the *na*-clause "possible world" into "desirable and potential world". This process, I showed, is driven by the context and considerations of optimal relevance; and (b) pragmatically resolving the semantic indeterminacy relating to "from whose point of view is the described state of affairs desirable". When the state of affairs described in the *na*-clause is desirable from the hearer's point of view and its potentiality is granted by the speaker, (44) is understood as issuing permission.

I want to argue that (38) is the interrogative counterpart of (44). Because of the particular context (say in a classroom, a pupil asks permission to ask a question), the hearer realises that the speaker does not intend to ask simply whether the state of affairs where she asks something is possible (as the semantics of *na* dictates). Such an interpretation is too weak, in the sense that it does not achieve enough contextual effects. For example, such an interpretation would not explain why the hearer, in this context the teacher, would typically react by granting or not granting permission to the pupil to speak; or why the pupil would then typically go on to ask her question or not, depending on the teacher's answer. So, in accordance with the criterion of consistency with the principle of relevance, the semantics of the *na*-clause has to be enriched into "the world described is desirable and potential". Moreover, in this particular context the hearer will infer that the world described by the *na*-clause is desirable to the speaker and that its potentiality depends on the hearer himself. Note that "possible" has to be enriched into "desirable and potential": the element of desirability will explain why the speaker will go on to ask the question if she is granted permission; the element of potentiality will explain why the speaker asks before going on with her wishes.

Now, on the assumption that (38) is an interrogative and as such encodes the information that it interpretively represents a relevant thought, one final semantic indeterminacy has to be resolved pragmatically: From whose point of view does the speaker represent the answer to her question as relevant? Since it

is obvious from the context that the speaker expects an answer, the hearer will infer that the interpretively represented thought is considered by the speaker relevant from her own point of view. So, we might informally paraphrase the explicitly communicated content of (38) in the following way: "I would find it relevant from my own point of view to entertain the following proposition: It is *desirable to me and potential* that I ask something".

When an interrogative *na*-clause ends up communicating a higher level explication of this sort and it is clear from the context that it is up to the hearer to grant the potentiality of the described state of affairs, then the *na*-interrogative is understood as having the illocutionary force of "a request for permission to do something". Notice that on this account there is no arbitrary link between *na*-interrogatives and the force of "asking for permission". The "asking for permission" interpretation is simply the interpretation on which the utterance is optimally relevant in this context.

Questions like (38), i.e. questions the explicit content of which is a request for permission, cannot be asked with non *na*-clauses. The reason is that non *na*-clauses encode the information that the proposition expressed is entertained as a description of a state of affairs in the base world. So, non *na*-interrogatives typically ask questions about the actual world, "real questions" as Pavlidou puts it. But, a world which is both desirable and potential is a kind of possible world, so there cannot be any enrichment from "actual" into "desirable and potential".

Let me now consider (39), which is classified by Pavlidou as an indirect offer or proposal to do something:

- (39) *na plino ego ta piata?*
 na wash-1s-PF the dishes
 Shall I do the dishes?

Let us imagine a context. In Mary's and Peter's household the usual practice is that when one of them does the cooking, the other does the washing up. Tonight Mary did the cooking but she can see that Peter is very tired, so in uttering (39) she offers to do the washing up.

Decoding (39) the hearer will recover the proposition that Mary is asking whether the state of affairs where she does the washing up is possible. This

interpretation, however, is too weak to be the interpretation that Mary intended: Mary does not want to know simply whether this state of affairs is possible (both Mary and Peter know that this state of affairs is in principle possible). So, the hearer will realise that some more inferential work is needed on his part in order to recover a relevant enough interpretation. How is the hearer to enrich the semantics of the interrogative *na*-clause in this case? The line of enrichment is indicated by certain contextual assumptions, such as that Mary has noticed that Peter is tired, Mary is not too tired, Mary has offered in the past to do the washing up if Peter was tired and so on. In a context like this the hearer is expected to infer that the state of affairs where Mary does the washing up is regarded by the speaker as potential and desirable to Peter. The typical answer to (39) would be a *na*-clause whereby Peter would communicate that this state of affairs is/is not desirable to him. Finally, the indeterminacy with respect to from whose point of view the speaker regards the answer to this question as relevant has to be resolved. In this particular context Mary genuinely seeks an answer, so she considers the answer to her question as relevant to herself. So, put informally, Mary ends up communicating explicitly something like "I would find it relevant from my own point of view to entertain the following proposition: It is desirable to Peter and potential that I do the washing up".

When a *na*-interrogative communicates such a higher level explicature and it is obvious from the context that the potentiality of the described state of affairs is granted by the speaker, then it has the illocutionary force of an offer to do something. This interpretation is the result of the linguistically encoded content of the utterance, on the one hand, and considerations of context and optimal relevance, on the other.

Questions where the speaker is explicitly offering to do something cannot be asked with non *na*-clauses because, as explained earlier, the semantics of non *na*-clauses cannot be enriched into "the world described is desirable and potential".

I argued that in both (38) and (39) the semantics of the *na*-clause is enriched into "the world described is desirable and potential" as a result of pragmatic considerations. (38) and (39) differ in that in (38) the world described is desirable from the speaker's point of view and its potentiality depends on the hearer whereas in (39) the world described is desirable from the hearer's point of view and its potentiality is granted by the speaker. Now, notice that in (38) the

speaker ends up asking about the potentiality of the described world (and not its desirability), whereas in (39) the speaker ends up asking about the desirability of the described world (and not its potentiality). This is because the desirability of the state of affairs described in (38) and the potentiality of the state of affairs in (39) depends on the speaker herself.

Finally, according to Pavlidou, the *na*-interrogatives in (38) and (39) are used to perform indirect speech acts. The direct speech act performed by these utterances is presumably a (direct) request for information. This direct speech act, however, is only performed in order to perform an indirect speech act: that of requesting permission in (38) and that of offering to do something in (39). On the speech act view, the hearer has to recover the indirect speech act involved in order to interpret an utterance like (38) or (39). I have shown, however, that no such thing is needed in order to understand these utterances. The "indirect offer" and "indirect request for permission" interpretations are simply the result of the hearer's search for an optimally relevant interpretation.⁸

Let's now consider (41), which is classified as a deliberative question. Suppose that A is bored and doesn't know how to spend her evening. Among the options she considers is going to the movies. So, she utters:

- (41) *na pao sinema (i ohi)?*
 na go-1s-PF to the movies (or not)?
 To go to the movies or not?

Deliberative questions can also be introduced by a *wh*-word (except for "why"⁹). For example, consider (45) uttered by a speaker trying to decide where she should spend her holiday:

⁸For further discussion of the issue of the role of indirect speech acts in communication with special reference to the so-called "short circuited implicatures", see Groefsema (1992). She reaches the same conclusion as here, namely that the recovery of indirect speech acts is not needed in order to account for the interpretation of the related utterances.

⁹It is interesting that *why*-interrogatives cannot be deliberative questions. Maybe this is because deliberation is concerned with decision making, and the sort of thing one can make a decision about is concrete, like taking some action, in a place, at a time, involving other persons or objects. One can't decide to bring about psychological entities like reasons or motivations.

- (45) Pou na pao?
Where na go-1s-PF
Where to go?

Such questions do not expect answers. The speaker is wondering whether she should go to the movies or not in (41), and where she should go in (45).

As with the other examples, the hearer processing (41) will realise that the speaker cannot be simply wondering whether it is possible to go to the movies in the given context. It is part of the context that the speaker is trying to decide whether she wants to go to the movies. It is also clear from the context that the speaker regards the answer to her question as relevant to herself. By virtue of being an alternative question, (41) represents both a positive and a negative proposition (Wilson and Sperber 1988b: 96, Clark 1991): "it is desirable and potential that I go to the movies or it not desirable and potential that I go to the movies". The utterance of (41) communicates that each of these disjuncts represents a thought which would be relevant if true. Given the contextual assumption that there is no addressee, the *na*-interrogative in (41) is understood as a deliberative question.

Similar considerations hold for the interpretation of the wh-interrogative *na*-clause in (45), which in the given context ends up communicating a higher level explicature like: "It would be relevant to me to entertain some completion of the following (incomplete) representation: It is desirable to me and potential to go to _____".

Finally, let us look at (42), which is classified as a dubitative question. Suppose, we never meet Mary any more in the College refectory and so I ask you:

- (42) pu na troi i Maria?
where na eat-3s-IPF the Mary?
Where might Mary eat/be eating?

Dubitative questions may also be yes-no interrogatives. For example, suppose we are expecting Kostas for lunch and I utter:

- (46) Na ine o Kostas idi sto dromo, arage?
 na is-3s the Kostas already on the road, perhaps?
 Could Kostas be already on his way, perhaps?

In these cases there is no reason for the semantics of the *na*-clause to be enriched. (42) communicates a higher level explicature like: "I would find it relevant from my own point of view to entertain some completion of the following incomplete representation: it is possible that Mary is eating at ____". (46), in the same vein, communicates a higher level explicature like: "I would find it relevant from my own point of view to entertain the following proposition: It is possible that Kostas is already on his way". On the other hand, if it is obvious in the context that the assumption that Kostas may be on his way already is compatible with the individual's beliefs about the world and may therefore be actual (suppose for example, that it is almost lunchtime and Kostas is known to never be late), then the hearer may infer that the described state of affairs is not simply possible but potential. There are, however, cases where, because of our beliefs about the world, the state of affairs described by the *na*-clause has to be possible (i.e. cannot be enriched into potential). For example:

- (47) a. Na ehi zisi 400 hronia?
 na has lived-3s 400 years
 Could she have lived for 400 years?
- b. Na ehi arage ksanagenithi?
 na has perhaps be born-3s again
 Could she have been reborn perhaps?

Now, if it is obvious from the context in which such dubitative questions are uttered that the speaker expects an answer and believes the hearer is in a position to give her one, then such dubitative questions will be understood as requests for information. The typically expected answer would be a *na*-clause, for example for (47a): *Isos na ehi zisi 400 hronia* "Perhaps she has lived for 400 years". If, on the other hand, the speaker does not expect an answer and does not consider the hearer capable of providing him with one or there is no hearer, then such

dubitative questions will be understood as (self-addressed) speculative questions. Pavlidou (1991: 20-21) considers the latter possibility only, since she claims that dubitative questions are questions with which the hearer wonders [my underlining] about the truth of the propositional content, in the case of yes/no interrogatives, or about that element of the propositional content that would make a true proposition out of it, in the case of wh-interrogatives". However, what type of question may be performed with a dubitative *na*-clause, i.e. an interrogative *na*-clause where the state of affairs described is regarded as possible or potential, depends on the rest of the context. So, such an interrogative *na*-clause may function as an information seeking question, or a speculative question, or a guess question as in (48), or a rhetorical question such as those discussed in 3.6.4., etc., depending on the context:

- (48) [the speaker is looking at two cards; the hearer cannot see what is on them]
 Pia na ine o asos?
 which na is the ace?
 Which one might be the ace?

Questions where the speaker expresses some doubt may also be performed with non *na*-interrogatives. For example,

- (49) Ine o Kostas idi sto dromo, (arage)?
 Is-3s the Kostas already on the road, (perhaps)?
 Is Kostas already on his way, (perhaps)?

The difference in meaning between a question like (46) and a question like (49) is that in choosing a *na*-clause the speaker communicates a higher degree of doubt. This can be explained on the basis of the semantic contrast between *na*- and non *na*-clauses. The state of affairs described by the interpretively represented thought in (49) is regarded as actual. So, (49) communicates a higher level explicature like "I would find it relevant to entertain the following proposition: Kostas is already on his way". An adverbial like *arage* "perhaps" may be used in addition to, for example, a hesitating tone of voice, some characteristic movement of the eyes,

etc., to indicate the intended interpretation. In other words, it is the presence of this adverbial and other contextual or paralinguistic features which encourage the hearer to interpret (49) as a dubitative question. Some such clue is necessary for (49) to be interpreted as a dubitative question, otherwise it is interpreted as a "real question". On the other hand, in (42) and (46)-(48) the speaker's doubt has been shown to follow from the semantics of the *na*-clause.

At this point one might wonder whether the speaker uttering a *na*-interrogative always regards the answer as relevant from her own point of view. This is not the case. Expository questions, i.e. questions where the answer is available to the speaker and she considers it as relevant to the hearer, may be asked with *na*-interrogatives. For example, consider (50):

- (50) Ti na diavasete gia tis eksetasis? Ti simasiologiki analisi ton erotiseon,...
what na-study-2pl-PF for the exams? The semantic analysis of
interrogatives,...
What should you study for the exams? The semantic account of
interrogatives,...

In this case the speaker represents the answer to her question as relevant from the hearer's point of view.

Finally, let me briefly mention that, as expected on the basis of the discussion in section 3.3, all the interrogative *na*-clauses we have considered in this section may be interpretively used given the appropriate context: the speaker may, for example, attribute the interrogative utterance to someone else; or she may attribute the utterance to someone else and express an attitude towards it, i.e. use the utterance echoically, etc. In such cases interrogative *na*-clauses are triply interpretive.

In this section I have proposed a relevance-theoretic account of the ways in which *na*-interrogatives may be interpreted. On this account, the meaning of a *na*-interrogative is a function of the meaning of the interrogative syntax and the *na*-verb form on the other. My analysis supports Wilson and Sperber's (1988a: 99) position expressed in the following quote:

"...The assumption is that the moods are unanalyzable and mutually exclusive semantic categories: that every sentence belongs to one and only one mood, which is not itself decomposable into more elementary moods.

It is easy to think of grounds for questioning this assumption. For instance, most languages have two types of interrogative sentence: those with an indicative verb, which expect an indicative answer, and those with a subjunctive verb, which expect a subjunctive answer. The Omotic languages of Southern Ethiopia have both indicative and imperative interrogatives, that is interrogatives with an imperative verb, which expect an imperative answer. In each case, the meaning of the interrogative is a function of the meaning of the interrogative marker on the one hand, and of indicative, subjunctive or imperative verb form, on the other"

My analysis is based on the fact that *na*-questions suggest *na*-clauses for answers. This suggests that a *na*-question specifies what type of answer the speaker would regard as relevant, that is a *na*-answer. The interpretation of the *na*-interrogatives considered here is, therefore, parasitic on the interpretation of the *na*-clauses which are their answers. In a similar way, Wilson and Sperber (1988a:96) and in greater detail Clark (1991:151-156) account for the differences in meaning between positive yes-no questions, negative yes-no questions and alternative questions, like those in (51),

- (51) a. Did you finish your homework?
b. Didn't you finish your homework?
c. Did you or did you not finish your homework?

in terms of the answer the speaker would regard as relevant in each case. Considerations of relevance, in particular considerations of processing effort, suggest that the speaker has chosen to express the proposition she would regard as relevant if true. So, a positive question such as (51a), which expresses a positive proposition, indicates that a positive answer would be more relevant than a negative one; a negative question such as (51b), which expresses a negative proposition, indicates that a negative answer would be more relevant than a positive one; and, an alternative question such as (51c), which expresses both a

positive and a negative proposition, indicates that a positive and a negative answer would be equally relevant. In the same vein, a *na*-question indicates that a *na*-clause would be, as far as the speaker can foresee, a more relevant answer than a non *na*-clause.

Finally, I have argued that the fact that certain types of questions may be asked with *na*-interrogatives but not with non *na*-interrogatives as well as the differences in meaning between *na*- and non *na*-interrogatives when used to perform the same types of questions follow from the semantic contrast between *na*- and non *na*-clauses.

3.6.3. Pavlidou's criteria as aspects of interpretation

I would now like to consider again Pavlidou's criteria for distinguishing between what she calls "the different types of questions performed by *na*-interrogatives" which were mentioned in section 3.6.1. On the approach I have developed here, some of these criteria seem to be actual aspects of the interpretation process and some seem to have no psychological basis at all.

What Pavlidou calls "the beneficiary of the act" and "the speaker's attitude" are on the relevance theoretic analysis I proposed necessary aspects of the interpretation process. They correspond to that part of the interpretation process where the semantics of the *na*-clause is enriched into "desirable and potential". On my approach, however, they are not defining characteristics of any type of questions performed by *na*-interrogatives but rather stages in the interpretation process well-justified by pragmatic considerations.

One of the criteria that Pavlidou proposes is "the combinability of the question with other illocutionary force indicators". Pavlidou has in mind typical markers of requesting like *parakalo* ("please") and *ligo* ("a little") which may combine with *na*-interrogatives like (38), expressions that seek agreement or reassurance like *simfoni* ("agreed") or *endaksi* ("all right") which may cooccur with *na*-interrogatives like (39), and dubitative adverbials like *arage*, *taha* ("perhaps") or the standardised verbal expression *les na* ("do you say/think that...") which may combine with dubitative *na*-interrogatives. For example:

- (52) a. na rotiso kati parakalo?
na ask-1s-PF something please?
Can I ask something please?
- b. na plino ego ta piata? Simfoni?
na wash-1s-PF the dishes? Agreed?
Shall I do the dishes? Agreed?
- c. pu na troi arage?
where na eat-3s-PF perhaps?
Where might he eat/be eating perhaps?

On the relevance view the combinability of such expressions with particular interpretations of *na*-interrogatives can be given a psychologically plausible explanation. Typical markers of requesting simply make the "indirect request" interpretation more accessible to the hearer; expressions that seek agreement make the "indirect offer" interpretation more accessible; dubitative adverbial and other expressions make the "dubitative" interpretation more accessible. It follows from the principle of relevance that a speaker will try to make the intended interpretation of her utterance as accessible as possible. One way of achieving this is by giving the hearer clues as to the context he is supposed to construct and use for the interpretation of the utterance. So, by using a request marker or an agreement expression or an expression of doubt the speaker ensures the recovery of the intended interpretation by making the right contextual assumptions accessible.

Pavlidou's fifth criterion has to do with the question's position in the discourse. Indirect requests and offers are, according to Pavlidou, continuation moves in a sequence, whereas deliberative and dubitative questions can be isolated in discourse. On the relevance view assumptions about the question's position in the discourse may sometimes be part of the context in which an utterance is processed, i.e. among the assumptions against which the relevance of the utterance is established. In the analysis I proposed the question's position in the discourse is not a defining property of the possible interpretations but may contribute to the interpretation process by virtue of contributing to the context.

Finally, Pavlidou's "person of reference" and "type of predication" do contribute to the interpretation but only in the trivial sense of being parts of the linguistically encoded content of an utterance. "The person of reference" is as far as I can see the subject of the clause (so in the case of *na*-interrogatives like (38) the subject will be either the speaker or some third person as Pavlidou observes, in the case of examples like (39) the subject has to be the speaker, etc.) and "the type of predication" depends on the meaning of the verb and also has to do with the temporal interpretation of the *na*-clause. When there is no tense marking on the verb, as in examples (38), (39) and (41), the *na*-clause will have its usual futural temporal interpretation. When there is some tense marking, as for example with asking hesitantly about what happened in the past, the temporal interpretation will be in accordance.

In conclusion, the criteria that Pavlidou proposes in order to distinguish between the different types of questions performed by *na*-interrogatives are on her analysis simple descriptive features. On the relevance analysis I am proposing they can be explained in terms of their more or less significant contribution to the interpretation process.

3.6.4. On "rhetorical" questions

In addition to the types of questions I have already discussed, Pavlidou (1991) distinguishes five types of rhetorical questions that may be performed with interrogative *na*-clauses. With the term "rhetorical questions" Pavlidou (1991:20) refers to questions "to which the speaker does not expect an answer, but suggests her/himself implicitly what the answer looks like". In particular, in all the cases she discusses the insinuated answer involves the negation of the proposition expressed by the question. The other characteristic property of these *na*-questions, according to Pavlidou, is that they have an exclamative feel: the speaker utters them in order to express her negative attitude towards the proposition expressed.

According to Pavlidou, the first type of *na*-rhetorical question involves "yes-no interrogatives with which the speaker expresses a negative evaluation of the propositional content P, which s/he considers impossible. The implied answer is - P, i.e. that the negation of P holds. In general, rhetorical questions of this type are

rebuttals of the addressee's preceding speech act or behaviour". For example, suppose Mrs Anna has been Peter's nanny. Peter is now a grown up but has maintained contact with Mrs Anna. However, lately he has not been to see her as often as he used to. The following dialogue takes place between Mrs Anna and her friend Mary:

- (53) Mrs. Anna: Me ksehase o Petros
 me forgot-3s the Peter
 Peter forgot me
 Mary: O PETROS na se ksehasi, kiria Anna?
 The Peter na you forgot-3s-PF, Mrs. Anna?
 PETER forget you, Mrs Anna?

Mary is here implicating that Peter could never forget Mrs Anna, that she is surprised Mrs Anna could think that he did, that she is annoyed with her for thinking so, etc.

Similar questions can also be asked with non *na*-clauses as in (54):

- (54) Mrs Anna: Me ksehase o Petros
 me forgot-3s the Peter
 Peter forgot me
 Mary: O PETROS se ksehase, kiria Anna?
 The Peter you forgot-3s, Mrs Anna?
 PETER forgot you, Mrs Anna?

In (54) Mary is implicating that Peter has not forgotten Mrs Anna, that she is surprised Mrs Anna thought so, etc. (54), however, sounds less "dramatic", less "emotional" than (53).

The first point I want to make here is that Mary's utterance in (53) and (54) is not an interrogative. It is not uttered with a high rising intonation as is the case with all the yes-no interrogative *na*-clauses we have considered so far; the subject "Peter" receives focal stress and the intonation is generally falling with a slight rise at the end. I will use the # to mark this intonation pattern. Moreover, Mary's utterance cannot be followed up by the expression *i ohi* "or not"; nor can you have polarity items in such an utterance:

- (55) a. *O PETROS na se ksehasi/se ksehase i ohi#
 The Peter na you forget-3s-PF/you forgot-3s or not#
 *PETER forget you/forgot you or not#
- b. *O PETROS na ksehasi/ksehase kanena#
 The Peter na forget-3s-PF/forgot-3s anyone#
 *PETER forget/forgot anyone#

I want to suggest that Mary's utterance in (53) and (54) is echoic: it is interpretively used to represent Mrs Anna's utterance in (54) or a thought behind it in (53) and to express an attitude towards its content.¹⁰ In (54) Mary attributes to Mrs Anna the proposition that Peter forgot her. In (53), on the other hand, Mary attributes to Mrs Anna the thought that it is possible for Peter to forget her. This proposition is a logical implication of Mrs Anna's utterance in (53): if Peter did forget her then it follows that it is possible for Peter to forget her. On the basis of linguistic clues, like the particular intonation pattern, the focus on "Peter", and contextual assumptions such as that Peter is very fond of Mrs Anna, that he is in general very loyal to his friends etc., the hearer is intended to infer that Mary's attitude towards the proposition "Peter forgot Mrs Anna" in (54) and "It is possible for Peter to forget Mrs Anna" in (53) is that of questioning their truth. In other words, Mary regards these propositions as interpretively representing relevant thoughts. Which thoughts? "Peter forgot Mrs Anna" in (54) and "It is possible for Peter to forget Mrs Anna" in (53). From whose point of view does the speaker regard these propositions as relevant? In this context these propositions are considered as relevant to the speaker herself. It would be relevant to the speaker to entertain the thought that Peter forgot Mrs Anna because she doesn't believe he did; and it would be relevant to the speaker to entertain the thought that it is possible for Peter to forget Mrs Anna because she doesn't believe it is possible. This is why Mary sounds surprised and is understood to be expressing her feelings rather than asking a question. In this way she implicates that it is not possible for Peter to forget Mrs Anna in (53), and that Peter did not forget Mrs Anna in (54). Moreover she is implicating that she did not expect Mrs Anna to think in this way, that she

¹⁰Echo-questions are in general echoic in this sense. See Blakemore (forthcoming).

is disappointed with the fact that Mrs Anna has so little faith in Peter, that she is annoyed with her, etc.¹¹

It is now easy to see why (53) sounds "stronger", more "dramatic" than (54). As a result of the semantic contrast between *na*- and non *na*-clauses, the set of implicatures communicated by (53) is not identical to that communicated by (54). In (54) Mary uttering a non *na*-clause is implicating that Peter did not forget Mrs Anna, whereas in (53) uttering a *na*-clause Mary is implicating that it is not (even) possible for Peter to forget Mrs Anna. This entails that Peter did not actually forget Mrs Anna. So, (53) communicates everything that (54) communicates plus the assumption that it is not even possible for Peter to forget Mrs Anna.

The second type of *na*-rhetorical questions, according to Pavlidou, involves "why-interrogatives with which the speaker expresses a negative evaluation of P; it is taken for granted that -P is possible. The insinuated answer is that -P should hold. Again the rhetorical question counts as *rebuttal* or *disapproval* of what the addressee reported". Suppose, for example, that Kostas has recently repeatedly burst into tears for some reason that most of his friends including Jane find ridiculous. Peter knows that Jane believes that Kostas has no reason for crying. Later Peter informs Jane that Kostas is crying again and Jane exclaims:

(56) Jane: Jati na klei?
Why na cry-3s-IPF
Why cry?

(56) does not expect an answer. The speaker is implicating that Kostas should not be crying, that she is surprised that he is crying, that she disapproves of this behaviour, that she is annoyed with Kostas, etc.

How does this interpretation come about? The speaker uttering the interrogative in (56) indicates that she considers some completion of the logical form it encodes as relevant from someone's point of view. Given the contextual assumption that Jane thinks there is no reason for Kostas's distress, the hearer is expected to infer that a proposition providing a reason for Kostas's behaviour

¹¹These examples differ from ironical utterances in that the speaker's primary attitude in (53) and (54) is not that of rejecting the proposition expressed by her utterance but rather that of questioning.

would be relevant from the speaker's point of view. We could informally paraphrase (56) in the following way: "It would be relevant to me (the speaker) to entertain some completion of the following representation: the state of affairs in which Kostas is crying because... is possible". So, the speaker is inviting the hearer to think of the ways in which such a representation would be relevant to her. It would be relevant to the speaker to entertain such a proposition because she thinks there is no possible world in which Kostas has reason to cry. Given standard contextual assumptions that one should not be distressed if there is no reason, the speaker is implicating that Kostas should not be crying as well as that she had not expected him to do so, that she is irritated with him, etc. In this way we can offer a psychologically plausible explanation of the emotive-exclamative character of questions like (56): the speaker is not asking such a question in order to seek or offer information but in order to express her feelings.

Similar effects could be achieved with a non *na*-question in the same context:

- (57) Jane: Jati klei?
 Why cry-3s
 Why is he crying?

(57), however, does not sound as emphatic as (56). This is due to the semantic contrast between *na*- and non *na*-clauses. Uttering (57) in this context the speaker is implicating that there is no reason in this world for Kostas to cry. Uttering (56), on the other hand, the speaker implicates that there is no possible world in which there is a reason for Kostas to cry. This entails that there is no reason for Kostas's crying in this world. So uttering (56), the speaker makes the strong statement that it is not even possible that Kostas has a reason for crying and succeeds in giving rise to all the implicatures (57) yields in the same context and more.

Pavlidou's third kind of *na*-rhetorical question also concerns why-interrogatives with which the speaker expresses a negative evaluation of P: in this case $\neg P$ is held not to be possible or achievable any longer. The implied answer is that the speaker would rather have that $\neg P$. The function of the question is to express a counterfactual wish of the speaker" (Pavlidou 1991: 21). For example,

suppose the speaker has just found out that her son has died in a car accident. In her grief she exclaims:

- (58) A: Jati na pethani o gios mou?
Why na die-3s-PF the son mine
Why should my son die? (=why should it be the case that my son is dead?)

In (58) the speaker is understood as communicating the counterfactual wish that her son were not dead. Moreover, she expresses her grief, her anger, etc. towards the fact that her son has died.

This interpretation is arrived at in much the same way as with the previous example. Uttering the interrogative in (58) the speaker indicates that she would find the answer to her question as relevant from someone's point of view. In this context the speaker could not be regarding the answer to her question as relevant to the hearer: she is not offering the hearer some information nor is she reminding the hearer of a piece of information he has apparently forgotten. Rather it would be relevant from her own point of view if she were given an explanation for why her son died, precisely because she strongly believes that there is no possible world in which there is some explanation, some reason for his death (at least not one that she would find satisfactory). She is thereby implicating that the world in which her son died for some reason is not a possible one. Given standard contextual assumptions, such as that she loved her child and wanted him to live a long and happy life, the hearer will infer that the speaker's wish is that her son had not died, a counterfactual wish since her son is now dead. In this respect (58) differs from (56). The implicated wish in (56) - that Kostas stops crying - may come true as far as both speaker and hearer are concerned. The implicated wish in (58), on the other hand, can never become true. In other words, the contexts in which these two pairs of utterances are interpreted differ with respect to assumptions about the possibility/impossibility of the described state of affairs. In this way we can explain Pavlidou's observation that the second and the third type only differ with respect to whether the communicated wish is counterfactual or not. Moreover, in this context by uttering (58) the speaker is communicating that she is sad, desperate, angry. Again, the speaker is exclaiming rather than asking.

Similar effects may be achieved by uttering the corresponding non *na*-question in this context:

- (59) A: Jati pethane o gios mou?
Why died-3s the son mine
Why did my son die?

However, as expected, (58) sounds more emphatic, more emotional than (59). This is because uttering (59) the speaker is implicating that there is no satisfactory explanation for her son's death in this world, whereas in (58) the speaker is making the stronger statement that there is no possible world in which such an explanation can be given. This entails that her son died for no good reason in this world, and so succeeds in communicating what (59) communicates in this context and more.

The next type of *na*-rhetorical questions that Pavlidou (1991:21) discusses involves *wh*-interrogatives with which "the speaker indicates that it is impossible to make a true proposition out of the function expressed with the question". For example, suppose it is Christmas eve and all the shops are closed when Peter, who is madly in love with Jane, proposes that we go out and buy some flowers for her. I exclaim:

- (60) Pou na vroume louloudia tetia mera?
where na find-1pl-IPF flowers such day
Where to find (=could we ever find) flowers on such a day?
(adapted from Pavlidou 1987:1022)

The speaker is communicating that we could never find flowers on Christmas eve, that Peter is a fool, that she is surprised or irritated with this idea, etc.

Uttering the interrogative in (60) the speaker indicates that it would be relevant from someone's point of view to entertain some completion of the proposition "It is possible that we find flowers at ____". From whose point of view is this relevant? Well, in this context it would be relevant to the speaker to be told that they could find flowers somewhere since she believes that it will not be possible for them to find flowers anywhere on that day. The speaker in (60) sounds surprised precisely because she doesn't believe they could find flowers anywhere

on Christmas eve. If the hearer trusts the speaker, he will infer further that it will not be possible for them to find flowers anywhere. Given additional assumptions, such as that Peter is full of such mad ideas and the speaker's patience is at its limit, the hearer may infer that the speaker is irritated, fed up with him, etc.

As with the previous examples we considered, similar effects could be achieved with a non *na*-question (in the future), which, however, would sound less emphatic because of the semantic contrast between *na*- and non *na*-clauses.

Finally, the last type of *na*-rhetorical questions is, according to Pavlidou (1991: 22), about "wh-interrogatives (except for why-interrogatives) with which the speaker echoes a previous question indicating that she is not very happy with a certain state of affairs". Such questions are common in phatic sequences. For example, suppose you know I don't have a job, which is causing me great financial problems. You meet me in the street and say:

- (61) A: jasou, pos ise?
Hello, how be-2nd
Hello, how are you?
B: Pos na ime?
How na be-1st?
How should I be?

As Pavlidou points out, the speaker is here implicating that she cannot report any positive changes. The interpretation process here is similar to the examples we have considered so far. On the basis of the context the hearer is expected to infer that the proposition "it is possible/potential that I [the speaker] am well" would be relevant to the speaker because she does not believe that it is possible/potential for her to feel any better. This explains the bitterness of B's utterance, the overtones of sadness, desperation, anger, etc.¹²

The first thing to note about the relevance theoretic analysis proposed here is that the interpretation of what Pavlidou considers different types of *na*-rhetorical questions involves similar processes. In other words, in terms of utterance

¹²As Pavlidou notes, this expression has been standardised. So, even when there is no context like the one I described, B's question on its own suffices to make the hearer infer that something is wrong with the speaker.

interpretation we do not need to distinguish the five categories of *na*-rhetorical questions that Pavlidou proposes. Moreover, these categories do not contribute to the interpretation process: the hearer does not need to be aware of the five categories of *na*-rhetorical questions nor does he need to match a *na*-interrogative he is processing to one of these categories in order to interpret it. As I showed, the interpretation of these interrogatives is driven by considerations of context and optimal relevance.

Finishing up, I want to comment briefly on two more issues. The first one has to do with the "exclamative" nature of these questions; the second one with their classification as "rhetorical" questions.

The *na*- and non *na*-questions we considered in this section are intuitively felt to be very close in meaning to exclamatives. The speaker is felt to be exclaiming rather than asking about something. This exclamative nature is noted in traditional grammars (Tzartanos 1945/1989: 310) and Pavlidou (1991: 21) also points out that "all these interrogatives can be uttered in a more or less exclamatory tone of voice". On the relevance analysis I am proposing, the affinity between such utterances and exclamatives can be explained. As I said in section 3.3, exclamatives like (62),

(62) How tall Jane is!

have been semantically analysed within relevance theory (Sperber and Wilson 1986, 1988a, Clark 1991) as interpretive representations of relevant thoughts, like interrogatives. Two features, however, which are optional in the case of interrogatives, are encoded by exclamatives: the thought represented by an exclamative is already available to the speaker and it is regarded as relevant to the speaker herself. So, in (62) the speaker already knows that Jane is very tall and indicates that she herself finds this relevant (the speaker is for example surprised at Jane's height, had not expected her to be so tall, etc.). In the case of the *na*- and non *na*-interrogatives I considered in this section, the semantic indeterminacy relating to from whose point of view the interpreted thought is relevant, is contextually resolved in favour of the speaker, that is in the way characteristic of exclamatives. On the other hand, the thought represented by such questions is not available to the speaker as in exclamatives; it is rather the negation of that

proposition which is available to the speaker (it is manifest in the context that the speaker believes that there is no true completion of the proposition expressed). This explains how such questions are similar and how they differ from exclamatives like (62) and why they are felt to be somewhere between questions and exclamations.

Pavlidou classifies the *na*-questions we considered here as "rhetorical" because the speaker does not expect an answer. Moreover, as we have seen, the suggested answer involves the negation of the proposition expressed. Notice first that on the account I am proposing these two properties are not defining features of any class of questions. On the relevance account, a psychologically plausible explanation is given of how the negative implicatures come about (as a result of the hearer's search for optimal relevance in the given context), and for why no answer is expected (the speaker strongly believes that there is no true completion of the logical form expressed by her utterance).

Moreover, notice here that there are several types of questions which do not expect an answer, and we would not want to call all of them "rhetorical". As I pointed out in section 3.3, questions like those in (63), usually called rhetorical questions,

- (63) a. What was your New Year's resolution?

Context: Mary to John who has just lit his first cigarette of the year despite his promise to stop smoking.

(Wilson and Sperber 1988a:92)

- b. What do you say when you get a present?

Context: His mother to little Johnny who has just received a present.

- c. Remember Peter Smith? He was always very bad with money. After all, who had to ask the bank for a loan at the end of every year?

(suggested by D.Wilson)

do not expect an answer: the answer is already known by both speaker and hearer. Why then are they being uttered? Wilson and Sperber (1988a) argue that, like all interrogatives, such questions interpretively represent relevant propositions.

In such cases the speaker regards the answer to her question as relevant from the hearer's point of view. In particular such questions act as reminders: they remind the hearer of a proposition which he appears to have forgotten. For example, (63a) achieves optimal relevance partly by reminding the hearer that his New Year's resolution was to stop smoking, (63b) by reminding little Johnny that you say "thank you" when you get a present, and (63c) by reminding the hearer that Peter Smith had to ask the bank for a loan at the end of every year. Some questions which do not expect an answer function as reminders, others achieve relevance by expressing the speaker's emotions, like the ones we discussed in this chapter, others expect no answer because no one can give an answer, like for example the self-addressed question in (64), etc:

(64) Now, where did I put my pen?¹³

¹³The question arises at this point whether there are *na*-exclamatives in MG, i.e. clauses with exclamative structure where the verb is preceded by *na*. The answer is, I think, no. In MG there is a distinct exclamative structure illustrated in (i):

- (i) Ti grigora pou tha perasoun i meres stin eksohi!
 what fast that will pass the days in country
 How quickly the days in the country will pass!

A *na*-verb form cannot be used here:

- (ii) *Ti grigora pou na perasoun i meres stin eksohi!
 what fast that na pass-3pl-PF the days in country
 How quickly the days in the country will pass!

In addition, utterances like (iii) may be understood either as interrogative or as exclamative depending on the intonation:

- (iii) Poso poli tis aresoun i karameles
 How much her like-3pl the candies
 How much she likes candies! / How much does she like candies?

When (iii) is uttered with a high fall it is likely to be understood as an exclamative, when it is uttered with a high rise it is likely to be understood as a question. (iv), however, is ungrammatical when uttered with a high fall; it may only be uttered with a high rise and it is understood as a question:

- (iv) Poso poli na tis aresoun i karameles?
 How much na her like-3pl the candies?
 How much might she like candies?

It follows that questions which do not expect answers do not form a natural class in terms of the way in which they are interpreted.

3.7. Summary

In this chapter I have introduced the relevance-theoretic distinction between two ways of using a representation: descriptively and interpretively. *Na*-clauses were argued in earlier chapters to encode information about a particular kind of descriptive attitude, namely the information that the proposition expressed is entertained as a description of a state of affairs in a possible world. I have shown that the relevance-theoretic assumption that any utterance may be used interpretively is useful in accounting for certain uses of *na*-clauses where a *na*-clause seems to represent another representation rather than describe a state of affairs in a possible world. In addition, I discussed *na*-clauses used to express emotions like surprise and disapproval and *na*-clauses used in narrative contexts, and showed that in terms of the way they are interpreted such *na*-clauses are quite similar. Their interpretation involves the embedding of the higher level explicature "it is possible..." under a higher propositional attitude verb "the speaker is surprised/disapproves...". In the remainder of the chapter I discussed interrogative *na*-clauses. I argued that the interpretation of *na*-interrogatives is parasitic on the interpretation of *na*-declaratives, i.e. that a *na*-interrogative indicates that the speaker would regard a *na*-answer as relevant. The differences in meaning between *na*- and non *na*-interrogatives, as well as the fact that certain types of questions may be performed only by *na*-clauses and others only by non *na*-clauses are accounted for on the basis of the semantic contrast between *na*- and non *na*-clauses as defined in earlier chapters. Finally, I have shown that descriptive categories like "dubitative", "deliberative", "rhetorical", etc. do not contribute to the interpretation process but are simply names for possible interpretations of interrogatives. In the same vein, I showed in chapter 2 that speech act labels such as "advising", "permitting", "requesting", etc. play no role in the way hearers understand the utterances they process. The interpretation of interrogative *na*-clauses is a function of what they linguistically encode, on the one hand, and of considerations of optimal relevance, on the other.

CHAPTER 4

On Definite and Indefinite Descriptions

4.1. Introduction

I argued in the previous chapters that mood indicators, like *na* in Modern Greek, encode procedural information concerning the speaker's attitude towards the proposition expressed. Moreover, I argued that such information contributes to the explicitly communicated content of the utterance by instructing the hearer to construct a particular type of higher level explicature. In the next chapter I will discuss the interpretation of *na*- and non *na*-relative clauses which depend on definite or indefinite descriptions. It has been shown in the literature that definite and indefinite descriptions may be interpreted attributively or referentially. In Modern Greek indefinite descriptions followed by *na*-relatives may be interpreted attributively only, whereas definite and indefinite descriptions followed by non *na*-relatives may be interpreted either referentially or attributively. I will show in the next chapter that this is due to the semantic contrast between *na*- and non *na*-clauses as defined in chapter 1. By way of preparation for the discussion in the next chapter, I will now take a closer look at the various ways in which definite and indefinite descriptions may be interpreted. I will argue that the referential use of definite descriptions (and perhaps indefinite descriptions as well) is best accounted for as contributing to the explicitly communicated content of an utterance. In contrast to mood indicators, however, the referential use of definite and (perhaps) indefinite descriptions contributes to the proposition expressed by an utterance, i.e. to the basic explicature of the utterance (and not to the higher level explicatures). The process of pragmatic enrichment, as constrained by considerations of optimal relevance, which was crucial for the interpretation of *na*-clauses will be shown to be also crucially involved in the derivation of the referential interpretation of definite descriptions (and perhaps indefinite ones as well).

4.2. The referential-attributive distinction

It is widely acknowledged in the literature (Donnellan 1966/1977, Kripke 1977, Grice 1969, Searle 1979a, Récanati 1989a, 1993, Neale 1990, Rouchota 1992a) that definite descriptions may be interpreted in two distinct ways: attributively and referentially. Donnellan (1966/1977:46) introduces the referential/attributive distinction in his paper "Reference and Definite Descriptions" as follows:

"A speaker who uses a definite description attributively in an assertion states something about whoever or whatever is the so and so. A speaker who uses a definite description referentially in an assertion, on the other hand, uses the description to enable his audience to pick out whom or what he is talking about and states something about that person or thing".

Donnellan illustrates this distinction with the well known example in (1):

(1) The murderer of Smith is insane

Suppose the speaker comes upon Smith foully murdered by someone unknown to her. Because of the brutality of the crime she might exclaim "The murderer of Smith is insane". What the speaker means to say on this occasion is that whoever murdered Smith is (must be) insane. In this case the definite description "the murderer of Smith" is used attributively¹. Suppose now that Perkins is on trial for Smith's murder. Observing his behaviour the speaker might utter (1) meaning to state that Perkins is insane. In this case the speaker has a particular individual in mind to whom she wishes to refer. The definite description "the murderer of Smith" is used referentially.

The referential/attributive distinction carries over to indefinite descriptions as well (Chastain 1975, Hall-Partee 1972, Wilson 1978, Donnellan 1978, Fodor and Sag 1982, King 1988, Ludlow and Neale 1991, Rouchota 1992b). For example, suppose that all the computers in our building behave strangely, so you

¹According to Donnellan (1966/1977) the phrase "whoever/whatever he/she/it is" can characteristically accompany definite descriptions when they are attributively used. Donnellan restricts himself to the discussion of utterances of the form *The F is G*.

call the computer centre to ask for help. When you hang up you say to your colleague:

(2) A computer expert will come to have a look

In this context the indefinite description "a computer expert" is used attributively. The hearer is expected to understand that some computer expert or other will come to take a look at the computers.

Suppose now that you are going out tonight with Peter who has been courting you for a long time. You have agreed that he will meet you at the little coffee shop opposite your house. I know this arrangement and looking out of your window I tell you:

(3) An admirer of yours is waiting for you at the coffee shop

In this context the hearer is intended to realise that it is Peter who is waiting for her. The speaker is using the indefinite description "an admirer of yours" referentially, i.e. to pick out a particular individual.

Given that definite and indefinite descriptions may be interpreted in these two ways, the question arises whether or not they are semantically ambiguous. In the first part of this chapter I will argue against the semantic ambiguity position and in favour of a pragmatic account of the various ways in which definite and indefinite descriptions may be interpreted. In the second part I will show how a psychologically plausible explanation for these interpretations can be given within relevance theory.

4.3. On the semantics of definite and indefinite descriptions

It is not clear whether Donnellan considers the referential/attributive distinction to be semantic or pragmatic in nature. On the one hand, he argues that this distinction has significant consequences for the truth conditions of a sentence. For example, if Smith was not murdered after all, then (1) on the attributive reading would have to be false, whereas on the referential reading it could be either true or false depending on whether Perkins is insane or not. Such observations suggest that the referential/attributive distinction is semantic. On the other hand, Donnellan consistently talks of the two *uses* of definite descriptions and claims that it is unlikely that definite descriptions are syntactically or semantically ambiguous. Moreover, he says (1966/1977:59), in parentheses admittedly,

"perhaps we could say that the sentence is pragmatically ambiguous: the distinction between roles that the description plays is a function of the speaker's intentions".

I will argue that definite and indefinite descriptions are not semantically ambiguous. Before I discuss the various arguments that have been brought forward to support the semantic ambiguity thesis, I want to explain why an analysis which assigns a univocal (though distinct) semantics to definite and indefinite descriptions and accounts for any interpretation which departs from this semantics in pragmatic terms is preferable to a semantic ambiguity based analysis.

4.3.1. General considerations

If definite and indefinite descriptions are ambiguous, then the referential-attributive distinction amounts to there being two distinct *senses* rather than *uses* of definite and indefinite descriptions. Kripke (1977) puts forward some basic objections to this claim. Kripke's discussion focuses on definite descriptions but most of his arguments apply to indefinite descriptions as well.

To choose between an analysis of definite descriptions in terms of a semantic ambiguity or in terms of a pragmatic indeterminacy, Kripke proposes the

following test. Let's make the hypothesis that there is a language which is similar to English except that the truth conditions of sentences with definite descriptions are stipulated to coincide with Russell's: for example, "the present king of France is bald" is to be true if and only if exactly one person is king of France and that person is bald. This Russell language (Kripke distinguishes three versions: the strong, the intermediate and the weak Russell language) is to be contrasted with what Kripke calls the D-language. In D-languages the referential-attributive distinction is semantic in nature and affects truth conditions. An unambiguous version of the D-language would be a language in which there are two different words for the definite article, say "the" and "ze", encoding respectively the attributive and the referential definite descriptions. The ambiguous version of the D-language has only one word "the" which may be interpreted according to the semantics of "the" or of "ze". The question now is, is English a Russell language or a D-language? Kripke shows that the referential-attributive distinction will arise in any of the Russell languages and could be accounted for pragmatically on the basis of the distinction between speaker's reference and semantic reference. Since Donnellan's distinction arises in the Russell languages, the fact that it arises in English provides no argument against the hypothesis that definite descriptions are semantically univocal in English. Moreover, Kripke continues (1977:18),

"If Donnellan had possessed a clear intuition that "Her husband is kind to her", uttered in reference to the kind lover of a woman married to a cruel husband, expressed literal truth, then he would have adduced a phenomenon that conforms to the ambiguous D-language but is incompatible with any Russell language. But Donnellan makes no such assertion: he cautiously, and correctly, confines himself to the weaker claim that the speaker spoke truly of the man to whom he referred. This weaker claim, we have seen, would hold for a speaker of a Russell language."

The conclusion that Kripke draws is that there is no evidence that English is the ambiguous D-language rather than a Russell language.

Moreover, according to Kripke, we could consult our intuitions, independently of any empirical evidence: would we be surprised if we found a language with two different words for the alleged two senses of definite

descriptions or a language with two different words for the two senses of indefinite descriptions? The answer seems to me to be positive, which suggests that our expectations favour a unitary semantic account of definite and indefinite descriptions. Then, Kripke says, we could investigate whether there are in fact languages which have two distinct words to express the two allegedly distinct senses. If no such language is found, then this is evidence in favour of a univocal semantic analysis of definite descriptions. As far as I know, such an investigation has not been undertaken.

Considerations hinging on building a semantic theory as economically as possible, usually expressed in terms of Modified Occam's Razor "do not multiply senses beyond necessity", also favour a univocal semantic account for definite and indefinite descriptions. If the various interpretations can be explained on the basis of general communicative principles of the sort proposed by Grice (1975/1989), the need for which is independently motivated, then they should be accounted for in this way.

In addition to such methodological considerations, there are two other arguments which, in my view, strongly favour a pragmatic account of the two uses of definite and indefinite descriptions over a semantic one. Definite and indefinite descriptions are not the only linguistic devices which admit of a referential interpretation. Common quantifiers also allow referential interpretations. For example, suppose it is common knowledge that Smith is the only person taking Jones' seminar. One evening Jones throws a party and Smith is the only person who turns up. When asked next morning whether his party was a success, Jones utters (4):

(4) Well, everyone taking my seminar turned up

intending to communicate that only Smith turned up.² In this context (4), which contains a universal quantifier, is used to communicate a singular proposition.

Since not only definite and indefinite descriptions but quantifiers as well are susceptible to referential uses, it is more likely that whether these expressions are used referentially or non-referentially is a pragmatically determined aspect of the

²Example (4) is taken from Neale (1990: 87). The point about quantifiers admitting of a referential interpretation is attributed by Neale to Sainsbury (1979).

interpretation of the utterance. Otherwise, one would have to pursue the claim that not only definite and indefinite descriptions, but quantifiers in general are semantically ambiguous.³

Second, the attributive and the referential interpretations are not the only readings that indefinite and definite descriptions may have. Suppose, for example, that Peter wants to know what I did on Sunday and I say:

(5) A friend of mine from Cambridge paid me a visit

In this case the speaker communicates that she is speaking about a particular individual; she does not, however, intend Peter to realise who this individual is. The speaker may want to conceal from Peter the identity of this friend or she may want to avoid bothering Peter with details that she considers irrelevant. This use of the indefinite description is neither attributive nor referential (since the speaker does not intend the hearer to pick out the particular individual she is talking about). Following Ludlow and Neale (1991), I will call this use *specific*.

Definite descriptions may also be interpreted specifically. Suppose, for example, you ask me why contrary to my habits I took the tube to come to your place and I answer with (6):

(6) My neighbour told me that the buses are on strike

The hearer will interpret the definite description "my neighbour" specifically: there is a particular neighbour that the speaker is talking about (even if the hearer is incapable of identifying this person).

In addition to the attributive, the referential and the specific use, indefinite and definite descriptions exhibit at least two more distinct uses, the predicative use as in (7) and (8), and the generic use as in (9) and (10):

(7) John is a teacher

(8) Peter is the teacher of my son

(9) A pig likes to roll in the mud

³As far as I know, no one has tried to argue that quantifiers are semantically ambiguous between attributive and referential uses.

(10) The whale is in danger of becoming extinct

Récanati (1993:293) mentions one more use of definite descriptions, the functional use, which was first pointed out by Barwise and Perry (1983:158-9). For example, consider:

(11) The President changes every four years

Uttering (11) the speaker need not be, and possibly isn't, talking about a particular individual; nor is she talking about whoever is President. Rather, she is saying that the value of the function "President" changes every year.

All this suggests that if definite and indefinite descriptions are semantically ambiguous, then they are not two ways ambiguous but multiply ambiguous: definite descriptions would be six ways ambiguous and indefinite descriptions would be five ways ambiguous. Such a proliferation of the senses of definite and indefinite descriptions makes the semantic ambiguity thesis even less attractive.⁴

Considerations of the type mentioned in this section suggest strongly that a univocal semantics and a pragmatic account of the various uses of definite and indefinite descriptions is preferable to the stipulation of a semantic ambiguity. In the following sections I will consider the arguments usually invoked in favour of the semantic ambiguity thesis and I will show that under closer scrutiny none of them offers good evidence for this thesis.

4.3.2. Truth conditions

The referential-attributive distinction has significant consequences for the truth-conditions of a sentence of the form "the F is G". Following Donnellan (1966/1977), (1) on the attributive reading is true if and only if there is a unique x such that x is Smith's murderer and x is insane. With regard to the referential reading, however, Donnellan feels that the speaker may have stated something true or false of the person to whom he referred, i.e. of Perkins, that man in the dock. This has been

⁴I will have nothing more to say about the predicative, the generic or the functional use in this thesis.

taken to suggest that on this reading the truth-conditions of sentences of the form "The F is G" are given by the singular proposition *a* is G, where *a* is an individual or object rather than a quantified expression (Peacocke 1975, Hornsby 1977, Kaplan 1978). It follows that definite descriptions are semantically ambiguous.

Influenced by Donnellan's ideas, many philosophers and linguists, for example Chastain (1975), Wilson (1978), Fodor and Sag (1982) and Stich (1986), claim that indefinite descriptions must be semantically ambiguous as well, because they make different contributions to the truth-conditions of the utterances that contain them, depending on whether they are used attributively or referentially. On this view, (2) where the indefinite description is interpreted attributively, is true if and only if the set of computer experts who will come to take a look at our computers is non-empty. (3), on the other hand, where the indefinite description is used referentially, is true if and only if the particular man to whom the speaker intended to refer, i.e. Peter, is waiting for the hearer at the coffee shop.

There are two points to be made here. First, the intuitions about the truth conditions of (1) on the referential interpretation and (3) are not clear. Many people (Hall-Partee 1972, Fodor and Sag 1982, Barwise and Perry 1983, Récanati 1989a, 1993, see also references in the first paragraph of this section) think that (1) on the referential reading is true if and only if Perkins is insane. However, Grice (1969) and more recently Neale (1990) think that the truth conditions of (1), whether it is interpreted referentially or attributively, are the same and given by the general proposition "there is a unique *x* such that *x* is Smith's murderer and *x* is insane". Grice suggests and Neale explores in more detail a pragmatic account for the referential use of definite descriptions. I will discuss this account in section 4.5.5. As for (3), where the indefinite description is used referentially, intuitions about the truth conditions are even fuzzier. In contrast to the proponents of the semantic ambiguity thesis mentioned earlier, other writers (Ludlow and Neale 1991, Récanati 1989a, Rouchota 1992b) claim that (3) is true simply if there is at least one admirer of the hearer such that he is waiting for her at the coffee shop (and the reference to a particular individual is captured at the level of implicature).

Second, even if some representation of the intended referent contributes to the truth-conditions of (1) and (3) on the referential reading, it does not follow necessarily that definite and indefinite descriptions are semantically ambiguous. As I explained in chapter 1, it has been convincingly argued within relevance theory

that the standard claim that different truth conditions mean different semantic representations is wrong (Sperber and Wilson (1986), Carston (1988), Wilson and Sperber (1993)). Given the distinction between *linguistic semantics* and *semantics of mental/conceptual representations*, argued for in chapter 1, definite and indefinite descriptions may have a univocal (though distinct) linguistic semantics, and thus be semantically unambiguous, but allow different propositions to be expressed as a result of different ways of enriching this linguistic semantics in particular contexts of use. This is the view argued for in Rouchota (1992a) and discussed here in section 4.5.5.⁵

4.3.3. Anaphora

The second type of argument in support of an analysis of definite and indefinite descriptions as semantically ambiguous stems from considerations concerning anaphora. This argument was originally expressed in connection with indefinite descriptions in Strawson (1950, 1952) and is also found in Chastain (1975) and Donnellan (1978).

Consider the following example, adapted from Chastain (1975:210):

- (12) There is *a mosquito* in here. You can hear *it* buzzing. See, *it* just landed on my left arm. Now *it's* biting me. [the speaker swats the mosquito]. Not much left of *it* now, is there!

The argument goes like this: the pronoun "it" is anaphoric on the indefinite description "a mosquito". An anaphoric pronoun can be either a bound variable or a genuine referring expression. Here "it" is not a bound variable. It is rather a referring expression inheriting its reference from the noun phrase in the antecedent

⁵Pragmatic processes operating at the level of what is said are also argued by Récanati (1989a, 1993) to account for the referential interpretation, though with a rather different outcome from that which I shall argue for.

utterance. Now, if "it" inherits its reference from "a mosquito", then the indefinite description must itself be a referring expression.⁶

Consider now an example with a definite description used referentially:

(13) The girl in the pink suit is one of my students. She is clever.

The definite description "the girl in the pink suit" could be argued to be a referring expression because the pronoun "she" takes its reference from this definite description.

The problems relating to anaphora considerations have been very influential in the study of the semantics of definite and indefinite descriptions. They have led to the development of new semantic theories like Discourse Representation Theory and File Change Semantics and to the rejection of the Russellian semantics. The important point for our discussion is that, whatever semantic theory you choose, anaphora considerations do not provide good evidence for the semantic ambiguity position. As Neale (1990) argues in detail, pronouns may be anaphoric on definite and indefinite descriptions which are clearly not referential. For example, suppose that the speaker is standing at a badly lit corner of a street when she notices a syringe and utters (14):

(14) *A drug addict* spent the night here. *He* left a syringe behind

Consider also (15) with a definite description from Neale (1990:175):

(15) The inventor of the wheel was a genius. I suspect s/he ate fish on a daily basis.

Moreover, as Neale (1990:177) argues, such anaphora considerations are weak because they apply to other quantifiers when they are patently not being used referentially as well:

(16) Few students passed the exam but they got a first

⁶The best reconstruction of the argument from anaphora is to be found in Neale (1990:175-176), from which I have drawn heavily in this paragraph.

On the basis of the anaphora argument not only definite and indefinite descriptions but most quantifiers would come out as ambiguous.

The discussion in this section suggests that anaphora considerations do not provide convincing evidence for the semantic ambiguity position.⁷

4.3.4. Scope constraints

The third argument in support of the view that definite and indefinite descriptions are semantically ambiguous has to do with the behaviour of indefinites with respect to scope. Fodor and Sag (1982) have argued that, in order to maintain a unitary Russellian semantics for indefinite descriptions, we would have to attribute exceptional "scope island" escaping properties to indefinites. This problem is solved if indefinite descriptions are treated as ambiguous, i.e. if they are assigned a semantically distinct referential sense as well.

Let me take an example to illustrate Fodor and Sag's view. Consider the following:

(17) A woman in the physics class thinks that every lecturer is after her

(18) Every woman in the physics class thinks that a lecturer is after her

For Fodor and Sag an embedded clause introduced by an attitude verb is one of the linguistic constructions which create scope islands. A scope island is a syntactic constituent which confines the scope of quantifiers to that constituent. So, as expected, there is no reading of (17) in which "every lecturer" takes wide scope over "a woman". But, surprisingly, in (18) the indefinite description "a lecturer" can take wide scope. So, either indefinites are quantifiers which behave exceptionally with respect to scope constraints or they are semantically ambiguous. Fodor and Sag choose the second alternative in order to avoid complicating the principles governing quantifier scope.

The same ambiguity arises with respect to definite descriptions in sentences with attitude verbs. For example:

⁷For more on this issue see Neale (1990: 165-221).

(19) Bill wants to marry the most beautiful girl in town

(19) may be interpreted either with the definite description taking wide scope with respect to the verb or with the definite description taking narrow scope.

The most important point against this view is made by Kripke (1972, 1977) and is explained in detail in Neale (1990: 121-124) and in Ludlow and Neale (1991). It is pointed out that the reading on which the indefinite description takes wide scope in (18), does not necessarily coincide with a referential interpretation of the indefinite. It may be that the speaker is talking about a particular individual and intends his hearer to identify this individual (referential interpretation); alternatively, it may be that the speaker does not intend the hearer to identify this lecturer, nor does she intend to talk about a particular lecturer but only about some lecturer or other (attributive reading). The same holds for (19) on the reading on which the definite description takes wide scope. This observation severely undermines the scope argument, as it shows that the referential interpretation of definite and indefinite descriptions cannot be defined as the reading of the utterance on which the (in)definite description takes the widest possible scope.⁸

4.4. A sketch of the semantics of descriptions

I have argued so far that definite and indefinite descriptions are not semantically ambiguous. In the last part of this chapter I will show how three of the various uses of definite and indefinite descriptions can be adequately accounted for within a pragmatic theory. In this section I will discuss the semantics of definite and indefinite descriptions.

Until a decade or two ago the most popular theory of the semantics of definite and indefinite descriptions was the one proposed by Russell (1905, 1919). According to Russell, both definite and indefinite descriptions are existentially quantified phrases of the form $\exists x(Fx \ \& \ \forall y(Fy \rightarrow y=x))$ and $\exists xFx$ respectively. On this view, the only difference between definite and indefinite descriptions is that definite descriptions signify a unique entity.

⁸For a more detailed discussion of the related issues see King (1988), Neale (1990), Ludlow and Neale (1991), Enc (1991), Rouchota (1992b) and Ruys (1992).

However, this way of distinguishing between definite and indefinite descriptions seems at best less than exhaustive. Compare the following examples adapted from Chastain (1975:205-206):

- (20) a. At eleven o'clock that morning, an ARVN officer stood a young prisoner, bound and blindfolded, up against a wall. He asked *the prisoner* several questions. When *the prisoner* failed to answer, he beat him repeatedly. After the beating, *the prisoner* was forced to remain standing against the wall for several hours
- b. At eleven o'clock that morning, an ARVN officer stood a young prisoner, bound and blindfolded, up against a wall. He asked *a young prisoner* several questions. When *a young prisoner* failed to answer he beat him repeatedly. After the beating, *a young prisoner* was forced to remain standing against the wall for several hours

On the most typical interpretation of (20a) the italicised definite noun phrases are understood as in some sense referring back to the indefinite description "a young prisoner" in the first utterance. On the most typical interpretation of (20b), on the other hand, the italicised indefinite descriptions can not be understood as referring back to the indefinite description in the first utterance. The speaker is understood to be speaking about a different young prisoner every time she uses the indefinite description "a young prisoner". In other words, whereas definite descriptions introduce already existing or given or, in some sense, familiar representations, indefinites can be used only to introduce novel representations (which might then be used as referents for definite descriptions). The Russellian semantics does not capture the familiarity-novelty contrast which has been taken as the basic condition determining the choice between a definite and an indefinite description by other authors in the past like, for example, Christophersen (1939) and Jespersen (1949) and more recently Heim (1982, 1983).

More importantly, Heim (1982, 1983) and Kamp (1984) have argued convincingly that the Russellian semantics should be rejected. The relevant cases, on which Heim and Kamp base their attack on the Russellian semantics are (a) examples, such as

- (21) a. There's *a mosquito* in here. You can hear *it* buzzing
 b. *A drug addict* spent the night here. *He* left a syringe behind

These were discussed in section 4.3.3. where it was argued that such examples do not provide evidence for the semantic ambiguity thesis. They do, however, suggest that indefinite descriptions, whether used attributively or referentially, may be better seen as some sort of referring expression rather than an existentially quantified statement. Since the pronouns *it* and *he* are referring expressions picking up their reference from the indefinite descriptions *a mosquito* and *a drug addict*, the latter may be some sort of referring expression as well; and (b) the so-called donkey-sentences, like for example

- (22) a. Every man who bought a donkey vaccinated it
 b. If John buys a donkey, he vaccinates it

where the indefinite description *a donkey* seems to introduce wide-scope universal quantification. (For a detailed discussion of the issues that (a) and (b) raise see Heim (1982: 1-119); for a brief presentation see Neale (1990: 222-224), from where (22a&b) are taken; for a recent defence of the Russellian account with respect to anaphora problems see Neale (1990:165-265) and Ludlow and Neale (1991)).

Heim and Kamp propose instead that definites and indefinites should be analysed as variable-like elements establishing reference markers or discourse referents. The term "discourse referent" was first introduced by Karttunen (1968a,b, 1976) and is intended to be distinct from the term "referent": a noun phrase may have a discourse referent even when it has no referent. Consider (23), which is taken from Heim (1983: 164):

- (23) a. Every cat ate *its* food
 b. John didn't see *a cat*

In (23a) the personal pronoun *its*, a type of definite noun phrase, functions as a so-called "bound-variable pronoun" and does not refer to any particular cat. Similarly in (23b), when the negation takes wide scope, which seems to be the preferred

interpretation, the indefinite *a cat* fails to refer. Both *its* and *a cat*, however, may be said to establish discourse referents.

In Heim's theory, definite noun phrases, one type of which is definite descriptions, pick out an already familiar discourse referent, whereas an indefinite noun phrase, one type of which is indefinite descriptions, introduce a new discourse referent. For example *a proposal* in (24) introduces a new discourse referent, whereas *the proposal* picks out an old one, in this case the one introduced by the indefinite description:

(24) Mary put forward *a proposal*. *The proposal* was accepted by everyone.

More precisely in Heim's File Change Semantics, discourse referents are thought of as "files", and the novelty-familiarity contrast is understood on the basis of the concept of "file" (Heim 1983, 1982: 274-326). Roughly, the idea is this. The listener's task of understanding consists in file-keeping. At any time in the course of an utterance the file contains the information that has been conveyed by the utterance up to that point. In other words, a file is a theoretical construct which mediates between language and the world. A file consists of file cards. For every indefinite description being processed a new file card must be opened; for every definite description being processed an old file-card has to be updated. On this view, the semantic representations of (25a) and (25b) are identical:

- (25) a. A cat came in
b. The cat came in

As Heim (1983:173) puts it,

"They [the articles, VR] are treated as though they weren't there at all when it comes to semantic interpretation".

The definite and indefinite article differ in so far as they impose different "Well-formedness Constraints". The definite article (and definites in general) requires that an already existing file card is updated, whereas the indefinite article (and indefinites in general) requires that a new file card is introduced.

The interpretation of definite and indefinite descriptions often, though not always, involves an existential presupposition. For example, both (25a) and (25b) typically presuppose that there is a cat. Both in Kamp's Discourse Representation Theory and Heim's File Change Semantics the existential presupposition is not part of the semantic representation of the utterance; rather it is built into the truth definition itself. So, in Heim's framework, the file corresponding to (25a) is true if *there is at least one* satisfying sequence, i.e. if there are actual individuals such that they fit the description in the sentence (: if there is a cat and it came in). Similarly, in Kamp's theory (25a) is true if *there is* a mapping from the model of the discourse representation, which is Kamp's version of the theoretical construct mediating between language and the world, onto an identical array of objects and predicate ascriptions within the model of the real world against which truth evaluation takes place (in Kamp's terminology, if the model of the representation is "embeddable" in the model of the world).

As I said earlier, definite descriptions carry, according to the Russellian account, a presupposition/entailment of uniqueness, which distinguishes them from indefinite descriptions. It has often been pointed out that this claim is too strong and several attempts have been made to save the Russellian account by using pragmatic principles to weaken it (Neale 1990: 93-102, Récanati 1986). According to Heim (1982: 230-237, 370-384), the presupposition of uniqueness is not part of the semantics of definite descriptions but rather follows from what she calls "Felicity Conditions" and some account of the context of utterance. For a sentence to be true or false with respect to a context, it first has to be felicitous with respect to that context. The relevant felicity condition requires that the context supply a unique value for the variable established by a definite, when this variable is free. Moreover, definite descriptions *presuppose* their descriptive content whereas indefinites simply *assert* it. So, for example, processing (26)

(26) The President of the United States is visiting Greece

you will find in the context that there is exactly one value for the variable corresponding to the definite description for which it is presupposed that it is the President of the US. On the other hand, processing (25b) "you will probably be aware of the existence of several cats and still be able to eliminate all but one as

unlikely candidates, simply by using some common sense and by taking the speaker to be reasonably rational and cooperative. In such a case there need not be a unique cat; there just needs to be a unique most likely cat" (Heim 1982:235).

One of the greatest problems with Heim's account is that definite descriptions often introduce novel discourse referents (Hawkins 1991, Kempson 1986, Kempson forthcoming). Consider the examples in (27) (adapted from Kempson forthcoming and Heim 1982: 371):

- (27) a. Watch out! *The cyclist* doesn't know where he's going
b. *The woman Bill fell in love with last summer* died
c. Turn off *the light*
c. Simon read a book about Schubert and wrote to *the author*

In all these cases the definite descriptions introduce a new discourse referent rather than pick up an old one. To account for such cases, Heim postulates an "accommodation" mechanism which links these definite descriptions to file cards that already exist. (For a critical review of Lewis's accommodation principle, on which Heim is based, see Blakemore 1992: 67-69).

Kempson (1986, 1990, forthcoming) develops a unified account of anaphora which is based, on the one hand, on relevance theory and, on the other, on an account of the semantics of definite descriptions reminiscent of Heim's and Kamp's. She adopts the claim that definites and indefinites establish discourse referents but rejects Heim's familiarity condition. She proposes that

"the concept of definiteness associated with both pronouns and definite NPs is simply that of guaranteed accessibility" (Kempson 1986:214).

In the relevance-theoretic framework a representation is accessible if it can be recovered from the context or if it can be constructed on the basis of the context. On this view, uniqueness follows from the semantics of a definite description and the principle of relevance:

"Antecedent identification is made by virtue of the guarantee that a representation of an individual is immediately, recognisably accessible to

the hearer about whom he or she is to understand the speaker as making an assertion. If there is any doubt as to which individual that should be, then the hearer will have to put processing effort into deciding which individual it is. However, the speaker's utterance in that form is a guarantee that no such processing cost is necessary. Thus, if the speaker is obeying the principle of relevance, as we would assume him or her to be, there can only be one such individual". (Kempson 1986: 216)

In more recent work, Kempson (forthcoming: 36) suggests that the meaning of the definite article is procedural (rather than conceptual):

"The intrinsic content of the definite article is merely an indication that the conceptual representation to be assigned is accessible at no unjustifiable processing cost".

There is no doubt that a lot more needs to be said about the semantics of definite and indefinite descriptions. In the spirit of the work of Heim, Kamp and Kempson, I will assume that definite and indefinite descriptions set up representations of individuals or objects. In addition, definite descriptions encode the information that the representations they set up are easily accessible, i.e. either recoverable from the context or constructable on the basis of the context. I will also assume that this meaning is procedural.

4.5. The pragmatics of definite and indefinite descriptions

In the remainder of this chapter I will show how three of the uses of definite and indefinite descriptions, the attributive, the referential and the specific use, can be accounted for on the basis of general communicative principles.

4.5.1. Attributive use

I will start by looking at the attributive interpretation of definite and indefinite descriptions.

Let us consider again the case of Smith's murderer. Suppose that A and B come upon Smith foully murdered and, because of the brutal nature of the crime, A exclaims:

(1) The murderer of Smith is insane

On the relevance view the interpretation of (1) in this context is along the following lines. Linguistic decoding will result in an incomplete logical form which will give access to the concepts named in the utterance. In the context given above, the hearer will not try to identify a particular referent, since the proposition expressed, "There is an x such that x is Smith's murderer and x is insane", is the minimal semantically complete, i.e. truth evaluable, representation which gives rise to enough contextual effects for no unjustifiable effort. For example, the information contained in (1) may combine with the hearer's assumption that insane murderers are difficult to catch, to contextually imply that Smith's murderer will be difficult to catch. Alternatively, (1) may be providing further evidence for, and therefore strengthening, the hearer's assumption that whoever wanted to harm Smith was insane. This interpretation is the first one that comes to mind and yields an adequate range of effects to be worth the hearer's attention. So, the hearer will accept it as the one the speaker intended. The point is that in this context an interpretation which satisfies the criterion of consistency with the principle of relevance is reached without identifying a particular referent.

How does the hearer recover the proposition expressed "There is an x such that x is Smith's murderer and x is insane"? The idea is that the hearer recovers this proposition by pragmatically enriching the logical form of the utterance. Remember that according to the semantic analysis I outlined, the hearer has to set up a conceptual representation in line with the content of the description. Notice further that the additional information encoded by the definite description, that the representation it sets up is easily accessible, is procedural and therefore does not appear in the proposition expressed by the utterance. Remember, also that,

according to Kempson (1986), the uniqueness implication follows from the procedural meaning encoded by a definite description. Now, if we assume that this procedural meaning does not contribute to the truth-conditions of the utterance, then the uniqueness implication does not appear in the proposition expressed either. As a result, definite and indefinite descriptions make identical contributions to the propositions expressed by the utterances in which they occur. As for the existential phrase "there is...", it seems reasonable to assume that hearers infer that definite and indefinite descriptions imply existence, unless they are instructed not to do so (for example, in fictional contexts).⁹

Notice that for the attributive interpretation to arise, it is not necessary that the speaker does not know who Smith's murderer is. Suppose, for example, that A is a policewoman and that she knows Smith's murderer because he gave himself up after the crime. Suppose also that B is aware of this. Upon seeing the dead body, A may still exclaim (1), without intending B to interpret the definite description referentially. The propositional form "There is an x such that x is Smith's murderer and x is insane" may achieve optimal relevance by, for example, strengthening the hearer's existing belief that A thinks all murderers are insane. If this is the case, then the hearer will accept this interpretation and will not infer that the definite description was used to pick out the individual who committed the murder.

Neale (1990) does not discuss the derivation of the attributive interpretation of definite descriptions. Presumably, it is simply derived via decoding. Assuming the Russellian semantics, as Neale (1990) does, the proposition expressed by (1) is "there is a unique x such that x is Smith's murderer and x is insane".

Ludlow and Neale (1991) are a little bit more explicit in their treatment of the attributive use of indefinite descriptions. Let us consider (2) again. All the computers in our building behave strangely and you call the computer centre to ask for help. You are told that they will send a computer expert over. When you hang up you say to your colleague:

(2) A computer expert will come to have a look

⁹I believe that the implication of existence may be shown ultimately to follow from relevance-theoretic considerations as well: it is somehow not relevant to talk about things that do not exist, except in certain specific circumstances.

All that a rational speaker , i.e. a speaker who takes into account what the hearer is capable of recovering, may have intended to communicate in this context is that some computer expert or other will come to have a look.

Ludlow and Neale propose the following account for the attributive use. In the spirit of Grice they draw a distinction between the proposition expressed (PE) and the proposition(s) meant (PM), i.e. the proposition(s) the speaker intends to communicate. They adopt the Russellian semantics, so, on their account, the proposition expressed (PE) by (2) would be something like "there is an x such that x is a computer expert and x will come to have a look". In this case the proposition expressed is also intended by the speaker to be communicated, so PE=PM. In addition to the PE and the PM Ludlow and Neale's machinery involves what they call the speaker's ground (SG), i.e. the proposition that is the object of the most relevant belief furnishing the grounds for the utterance. In the case of (2) the speaker's ground would be a general proposition that some computer expert will come to take a look. So, the attributive use of indefinite descriptions (and presumably of definite ones as well) is a case where SG=PE=PM. As we will see in the following sections PE, PM and SG do not always coincide, thus providing Ludlow and Neale with a way of identifying and describing each of the uses of indefinite descriptions.

Note, however, that Ludlow and Neale's description of the attributive use as the case where SG=PE=PM=a general proposition of the type "there is an x, x is a computer expert and x will come to have a look" is not adequate. As I explained earlier in connection with definite descriptions, SG does not have to be a general proposition for the description to be interpreted attributively. For example, the speaker of (2) may know that a particular computer expert called Peter is going to take a look at their computers. Still she may utter (2) with the intention to inform the hearer that some person with the property of computer expert is coming. What is crucial for the way in which definite and indefinite descriptions are interpreted in different contexts is not what the speaker believes but which of her beliefs she intends to communicate.¹⁰

¹⁰Perhaps this problem would not arise if Ludlow and Neale had explained what makes a certain belief of the speaker "the most relevant belief furnishing the grounds for her utterance". The role of SG will be further discussed in later sections.

On the relevance account I am developing, the proposition expressed by (2) in this context will be "there is an x such that x is a computer expert and x will come to have a look". This will be derived pragmatically by enriching the semantic representation of the utterance along the lines outlined earlier with respect to (1). The only difference is that the indefinite description in (2) does not convey the guarantee of immediate accessibility and, consequently, the implication of uniqueness. Within relevance theory, a psychologically plausible explanation is given for why the proposition expressed is also the proposition meant, to use Ludlow and Neale's terminology. The hearer will choose this interpretation because it is consistent with the principle of relevance: it achieves an adequate range of contextual effects without putting the hearer to unjustifiable effort in deriving them. For example, it may combine with the hearer's belief that computer experts can repair computers to yield the contextual implication that the computers will soon be in operation again.

4.5.2. Specific use

In this section I will discuss what I will call the specific use of definite and indefinite descriptions. The discussion will focus on indefinite descriptions but the proposed analysis carries over to the specific use of definite descriptions.

Let me start by taking a closer look at the uses of indefinite descriptions that have been cited in the literature under the label "referential". Consider the following example from Chastain (1975:212). Suppose that reading the morning paper the speaker comes across the story that Dr. M.DeBakey from Texas stated at a press conference that an artificial heart could be developed within the next five years. The speaker then reports this to the hearer by uttering (28):

(28) A doctor from Texas claims that artificial hearts will be developed within five years

Chastain, like most philosophers who have written on the subject, claims that this is a referential use of the indefinite description "a doctor from Texas" because the speaker has a particular individual in mind.

The aim of a pragmatic theory, however, is to provide an account of the way in which utterances are interpreted. In doing this for (28), what is of interest is not whether the speaker has a particular individual in mind but whether she intends to *communicate* that she has a particular individual in mind.

Bearing this point in mind, let us consider the various interpretations that (28) may have in different contexts. If it is not manifest to the hearer that the speaker has read a story about a particular doctor in the newspaper, say, for example, the hearer is not aware that (28) is a report, then all the hearer will be able to recover (and in these circumstances all a rational speaker could have intended to communicate) is "some doctor (or other) from Texas claims that artificial hearts will be developed within five years". This would be the attributive use discussed in the last section. On the other hand, if it is manifest to the hearer that the speaker is talking about a particular individual, because for example, the hearer knows that the speaker reads the relevant section in the morning paper, the case that Chastain probably had in mind, then all the speaker could have intended to communicate is that "a particular doctor from Texas claims that artificial hearts will be developed within five years". Let us call this the specific use. In a slightly different context (28) might communicate something stronger. Suppose, for example, that we can both see our colleague from Texas, Dr M. DeBakey, approaching, and nodding in his direction I utter (28). In this context the hearer will most naturally take me to have intended to communicate that "Dr. M.DeBakey claims that artificial hearts will be developed within five years". Let us call this the referential use.

It follows that, in addition to the attributive reading of the indefinite description, (28) has two more interpretations, depending on whether the speaker intends the hearer to identify the individual she is talking about or not. Like Ludlow and Neale (1991), I will distinguish the specific and the referential use of indefinite descriptions. According to Ludlow and Neale (1991:177):

"An indefinite description 'an F' is being used referentially in an utterance of 'An F is G' iff (i) the speaker intends to communicate something about a particular individual *b* and (ii) the speaker is using 'an F' intending that his audience shall realise that it is *b* that he intends to communicate something about".

The same understanding of the referential use with connection to definite descriptions is to be found in Neale (1990) and independently in Rouchota (1992a). The referential interpretation will be discussed in detail in the next section. For the time being I want to concentrate on what has been misleadingly called the "referential" use in the literature and which I will call specific. In what follows I will use the term *specific* to refer to cases where uttering a sentence of the form 'an F is G' the speaker intends to communicate that she has a particular individual/object in mind to whom/which she ascribes G, but she does not overtly intend the hearer to identify this individual/object (although of course he might).

In their discussion of the specific use Ludlow and Neale make the same mistake as Chastain: they confuse the beliefs that the speaker may hold with the beliefs the speaker intends to communicate with her utterance. They give the following example: the speaker has been informed that Mr Beastly, an auditor from the IRS who visited her last year, is coming to see her today. The speaker "has no reason to expect [the hearer,VR] to know of Mr Beastly, or to know that [the speaker] was audited by the IRS last year" (Ludlow and Neale 1991:181). In this context the speaker utters (29):

(29) An auditor is coming to see me today

According to Ludlow and Neale all the speaker intends to communicate, the PM, is the general proposition that some auditor is coming to see the speaker on the day of the utterance. (This is, on their analysis, the PE by the utterance as well). Nevertheless, Ludlow and Neale call this use specific because the speaker has singular grounds for asserting (29), i.e. the speaker has the singular belief that Mr Beastly is coming to see her. However, if our aim is to account for the way (29) is interpreted, we would be interested in the singular grounds of the speaker just in case they were part of what the speaker intended to communicate. And in this case they are not. In this context the indefinite description in (29) is interpreted attributively.

Ludlow and Neale distinguish between the "weakly" specific use of an indefinite and the "strongly" specific use of an indefinite. In the case of the "weakly" specific use, the hearer has no reason to think that the speaker has a particular individual in mind, like for example in (29). In the case of the "strongly" specific

use, the speaker has reasons to believe that the speaker has singular grounds for her assertion. As I argued, the indefinite description in (29) should not be thought of as specific at all.

Let me now turn to the cases that Ludlow and Neale characterise as strongly specific. Consider the following example adapted from Ludlow and Neale (1991:181). Suppose we have been talking about the pressure on academics to publish their work. You have been claiming that they are under no such pressure, and then I utter (30):

(30) A colleague of mine has been sacked for failing to publish

As Ludlow and Neale correctly point out, it is difficult to see how a hearer processing such an utterance would not infer that the speaker is speaking about a particular individual. Ludlow and Neale offer the following analysis for such examples. The speaker's ground (SG) is the singular belief that a particular individual, for example, Mark, was sacked for failing to publish. The proposition expressed (PE) by the utterance involves the Russellian formulation of the semantics of indefinites. Informally: "there is an x such that x is a colleague of the speaker and x was sacked for failing to publish". According to Ludlow and Neale, the speaker here does not intend to communicate that she has singular grounds for her assertion; "However, you [the hearer, VR] would undoubtedly take me to have singular grounds for this assertion...upon reflection I would expect you to realise that a singular belief furnishes the grounds for my utterance" (Ludlow and Neale 1991:181).

Two questions arise here. How can we account for the fact that the hearer is likely to infer that the speaker has a particular person in mind? And, is the indefinite description in (30) interpreted specifically, in other words does the speaker intend to communicate that she knows of a particular colleague of hers that s/he was sacked because s/he didn't publish?

In the context given for (30) the speaker intends to communicate that academics are indeed under pressure to publish because they may lose their job if they don't. Intuitively there is a difference between the conclusion "academics are under pressure to publish their work", which the hearer will infer on the basis of relevance considerations, and the conclusion "the speaker has a particular

colleague in mind", which the hearer cannot help but derive. The difference seems to be that whereas the former is essential to establish the point of the utterance, the latter is not.

Compare, now, the following example, where the same situation arises with respect to a definite description. Suppose you ask me why, contrary to my habits, I took the tube to come to your place and I answer with (6),

(6) My neighbour told me that the buses are on strike

Suppose the hearer has no means of identifying the speaker's neighbour and the speaker knows this very well and does not expect him to do so. Still, the hearer cannot but interpret the definite description specifically: there is a particular neighbour that the speaker is talking about, the speaker has an individuated representation of the neighbour she is speaking about. Notice, moreover, that in a way similar to (30) the point of uttering (6) does not lie with the implicature that the speaker has a particular individual in mind when she uses the definite description "my neighbour". Rather, (6) achieves relevance by explaining why the speaker did not take the tube.

Here's how we can account for the interpretation of the indefinite description in (30) in relevance-theoretic terms. Each concept in the semantic representation of the utterance gives access to encyclopaedic information related to this concept. Some of the encyclopaedic assumptions that these concepts give access to are intended by the speaker to be entertained by the hearer and to form part of the context against which the utterance is intended to be processed. On the relevance view, the construction of the context in which the utterance is intended to be processed is part of the inferential phase of utterance interpretation. So, for example, in setting up the concept COLLEAGUE there are certain more or less trivial assumptions that we hold about colleagues and which will become immediately accessible. For example, that colleagues are people that we work with, we normally see them every day, we know their names, we are able to recognise them, we get on more or less well with them, and so on and so forth. More importantly for the interpretation of (30), the group of concepts COLLEAGUE OF SPEAKER make accessible assumptions of the type: the speaker works with this person, the speaker sees this person every day, the speaker can recognise

this person, probably knows his/her name, has a more or less superficial relation with him/her, etc.

On this view, it is easy to explain how the hearer cannot fail to realise that the speaker has a singular belief concerning some particular colleague, as Ludlow and Neale put it, while interpreting (30). The trivial piece of information that the speaker has an individuated representation of the colleague who got sacked becomes automatically accessible through the corresponding concepts, in particular through the encyclopaedic assumptions that these concepts activate. This piece of information is part of the "script" or the "encyclopaedic chunk" associated with being colleagues.

Notice, however, that the claim that this assumption will be accessed does not mean that it is one of the assumptions which will be crucially involved in establishing the relevance of the utterance. On the relevance view, not every assumption intentionally made manifest by an utterance is communicated with the same strength. Some implicatures are stronger, others are weaker. The implicature "academics are under great pressure to publish their work" is a strong implicature of the utterance. It is a contextual implication derived inferentially on the basis of the proposition expressed by (30) and an assumption like "if academics get sacked for failing to publish, then they are under pressure to publish". On the other hand, to the extent that the assumption "the speaker has a particular individual in mind" was intended to be communicated, it is a weakly communicated implicature which contributes to the interpretation process by setting up part of the context (however trivial this part may be). Since the speaker intended to communicate this assumption in uttering (30), even if only weakly, the indefinite description is used specifically. (It is difficult to imagine that in this context the speaker did not intend to communicate that she knows the person who got sacked for failing to publish; if asked whether she has a specific case in mind, she would presumably acknowledge it). The interpretation of the definite description "my neighbour" in (6) could be accounted for in the same way.

Are we to conclude from the discussion so far that the implicature associated with the specific reading of an indefinite (or definite) description never contributes to the relevance of the utterance in a crucial way? The answer is no. Ludlow and Neale (1991:181, fn18) mention in a footnote the following example from Fodor and Sag (1982), where "the speaker intends to convey that he has

singular grounds for his assertion": Suppose that the speaker is about to return some tests she has just marked. Suppose, further, that the speaker has been told that a pupil in this class, Henry, cheated. Before she hands back the papers, the speaker utters (31):

(31) A student in this class cheated in the examination

The speaker addresses herself to all the students in the class and she does not intend them to identify the individual who cheated (although of course Henry will understand that the speaker knows that he cheated). What the speaker intends to communicate in this context is that she knows of one of the students that he cheated.

On the relevance-theoretic account, the assumption that the speaker has a particular student in mind would be a contextual implication following from the proposition expressed by (31) and contextual assumptions about why the teacher would utter (31) in the first place. Is this interpretation consistent with the principle of relevance? It is certainly an interpretation that the speaker might have expected to give rise to enough effects to be worth the hearer's attention. For example, if the speaker has a particular individual in mind in uttering (31), she is warning everyone that when students cheat she can find out, that therefore they should not try to cheat, that she may not take the issue further now but if it happens again there will be a penalty and so on and so forth. So, this interpretation is consistent with the first clause of the definition of optimal relevance. Assuming that the intended effects could not have been achieved in a more economical way, this interpretation satisfies the criterion of consistency with the principle of relevance, and is the one the hearer must choose.

Summing up, the assumption that the speaker has a particular individual in mind, associated with the specific interpretation of a description, is sometimes weakly implicated and contributes to the overall relevance of the utterance only indirectly, by forming part of the context against which the utterance is to be interpreted. This is what happens in (30). Sometimes, however, the assumption that the speaker has a particular individual in mind makes a crucial contribution to the way the utterance achieves relevance. And this is what happens in (31).

I would like to finish this section with a brief comment on what Ludlow and Neale call speaker's ground (SG) for an assertion. I have already expressed serious doubts with regard to the role of SG within a psychologically plausible account of the way definite and indefinite descriptions are interpreted. In accounting for the particular interpretation of an utterance, we are interested in those beliefs of the speaker which she intends to communicate. Now I want to point out that even in terms of simply describing what is going on in the various uses of description, SG is not useful. According to Ludlow and Neale, SG coincides with PM in the case of the attributive use, where we have $SG=PM=$ a general proposition, and in the case of the referential use, where we have $SG=PM=$ a singular proposition where the subject is an identified individual (see next section). The SG coincides with the PM in some cases of what Ludlow and Neale call the strongly specific use, as in example (31). The speaker's ground is not part of what the speaker intends to communicate only in the weakly specific uses, as in example (29), and in some of the strongly specific uses, as in example (30). So, you might claim that SG is useful in keeping apart these cases from the rest. But, as I have argued, Ludlow and Neale's analysis of these cases is inadequate. The indefinite description in (29) is interpreted attributively, not specifically, and the speaker does intend to communicate, although only weakly, that she has a particular individual in mind in (30). I conclude that the level SG is redundant for the purposes of our discussion.

4.5.3. Referential use

There are two issues with respect to the referential use of definite and indefinite descriptions that have been central in the literature and that I am going to discuss here. The first one has to do with the descriptive content of the definite or indefinite description: Is it communicated? What is its role in the interpretation of the utterance? Is it part of the proposition expressed by the utterance? The second issue is whether the referential interpretation of a definite or indefinite description is an implicature or part of an explicature of the utterance containing it. These questions end up being decisive for what we take the proposition expressed by an utterance with a referentially used definite or indefinite description to be. The views

I am arguing for here were initially presented in Rouchota (1992a) and Rouchota (1992b).

In his original formulation of the referential/attributive distinction Donnellan (1966/1977:46) argued that in the attributive use a definite description is used "essentially", in the sense that the speaker wishes to assert something about whatever or whoever fits that description. It follows that if a definite description is used attributively it contributes to the proposition expressed. In the referential use, on the other hand, the definite description is only a tool for doing a certain job, i.e. calling attention to a person or thing. When the definite description is used referentially, Donnellan (1966/1977:61-64) argues that it is not clear what is meant by "the statement". The problem is this. If the description does not fit the referent but the predicate is true of the referent then, according to Donnellan, we would like to hold that the speaker has said something true. So, Donnellan believes that it is only the referent (and not the content of the description) that appears in the proposition expressed. This ties up with his claim that in the referential use the definite description is nothing but a device to enable the hearer to pick out the individual or thing that the speaker is talking about: a device that could be replaced by any other device which could do the same job.

Similarly, Searle (1979a) argues within the speech act framework that in the referential use the descriptive content of the expression used is not part of the proposition expressed by the utterance.¹¹ Also, Récanati (1989a, 1993), in an altogether different framework, argues that on the referential reading the proposition expressed is a singular one of the form '*a is G*' where *a* is the individual or object that satisfies the descriptive content of the definite or indefinite description. Récanati (1989a) claims that the descriptive content itself does not appear in the proposition expressed but rather functions as a contextual condition, i.e. as a condition which must be contextually satisfied for the sentence to express a definite proposition. In more recent work Récanati (1993: 277-299) puts forward the view that the descriptive content of a definite or indefinite description contributes to the interpretation process by activating a "de re" concept under which this descriptive content is filed. The characteristic property of "de re" concepts is the truth-conditional irrelevance of their descriptive content.

¹¹For a detailed review of Searle's account see Rouchota (1992a: 149-151).

On the view represented by Donnellan, Searle and Récanati, the definite description itself does not contribute to the proposition expressed when used referentially because (a) it does not contribute to the truth conditions of the utterance, and (b) it is inessential, in the sense that its only function is to secure reference and it could therefore be replaced by any other expression capable of picking out the right referent.

On the other hand, Grice in his paper "Vacuous Names" (1969) takes a different position. He argues that "what is said" by an utterance containing a definite description is the same on both the referential and the attributive interpretation of the description. Grice assumes the Russellian semantics for definite descriptions and so the proposition expressed by, for example, (1) is "there is a unique *x* such that *x* is Smith's murderer and *x* is insane" on either reading. On his view, the description itself is part of "what is said" and if it does not fit the referent then what the speaker has literally said is false (though on the referential reading she may have implicated something true if the intended referent is actually insane). Neale (1990) and Ludlow and Neale (1991) argue in the same way. They seem to take over the view that the only contribution of the descriptive content to the interpretation process is to help the hearer to establish the referent.

I want to argue (a) that on the referential interpretation both the definite/indefinite description itself and (some representation of) the intended referent *a* contribute to the truth conditions of the utterance and (b) that the descriptive content of the description does not simply help to establish reference but plays an important role in the interpretation of the utterance by contributing to the construction of the context in which the utterance has an optimally relevant interpretation.

Consider the following examples:

- (32) The fat apple-pie is sitting in his usual chair
- (33) The last daft old hen you dealt with this morning kept bothering me all afternoon
- (34) The magician is in bed
- (35) Is the king in his countinghouse ?

Suppose (32) is uttered by a waitress to refer playfully to a regular customer who happens to be fat, always asks for an apple-pie and has a place where he usually sits. Suppose that (33) is uttered by an angry salesman who has been serving an irritating customer. (34) could be used by the doctors in a mental hospital to refer to a patient who is called Fordell and thinks he is a magician. (35), finally, is an example from Donnellan where the speaker uses the expression "the king" to refer to the person that she considers to be a usurper. In this example the speaker conforms to the code other people are using to make sure that her question will be understood.

In all these examples the definite descriptions could be replaced by more "accurate" ones. So,

- (36) The fat customer is sitting in his usual chair
- (37) The last customer you dealt with this morning kept bothering me all afternoon
- (38) Fordell is in bed
- (39) Is the usurper in his countinghouse ?

With the examples (36)-(39) the speaker will (everything else being equal) succeed in referring to the person referred to by the corresponding definite descriptions in examples (32)-(35). It is, however, clear that although reference is preserved the change of the definite description has not left the meaning conveyed by the utterance unaffected. So, (36) does not have the humorous effect of (32). (37) lacks the expression of anger, aggression, sarcasm characteristic of (33). (38) may be more difficult to process than (34), if Fordell is always referred to as "the magician" and no one remembers his real name any more. (39), lastly, may be incomprehensible if, for example, the usurper is the real king's twin brother and nobody has understood that the real king has disappeared. Alternatively, (39) may be inappropriate because it fails to serve the speaker's intentions: suppose the speaker wants to know whether the usurper is in the countinghouse because she intends to have him killed. If she utters (39) she will probably be arrested by the guards rather than get the information she wants.

These examples suggest that, contrary to what is usually assumed, the descriptive content of the definite description contributes to the information

conveyed by an utterance with a referentially used definite description. This seems to be correct not only for uses like those in (32)-(35), which one might claim are non literal and therefore different, but also in indisputably literal cases. For example, consider the utterance in (40) below:

(40) The notoriously moody tennis player threw his racquet at his opponent's head

Say that (40) is uttered by a sports reporter commenting on McEnroe's behaviour during his last game. Of course the reporter could have referred to McEnroe as "McEnroe" or "the former Wimbledon champion" or "the American" (suppose the other player is a Russian) etc. All these and many other descriptions would have ensured reference to the particular individual the speaker wishes to speak about. The descriptive content of the definite description "the notoriously moody tennis player", however, not only serves to pick out the right individual, but also contributes to the effects achieved by (40) by alluding to the fact that there have been many other occasions when McEnroe behaved inappropriately on court. This may be intended to communicate that the speaker disapproves of McEnroe, and perhaps of bad tempered people in general, that he wants the regulations of the game to prevent such behaviour, that he wants players who behave in this way to be punished and so on. None of these assumptions would have been communicated as easily in this context by any of the other definite descriptions. It follows that the speaker has chosen this particular definite description to refer to McEnroe because she thought it to be the most efficient way to achieve her intended effects.

The same situation arises with indefinite descriptions used referentially. For example, suppose that the speaker and the hearer are attending a function and they notice Jones, whom they both know to be a convicted embezzler. Seeing Jones flirting with the hearer's sister the speaker utters (41):

(41) A convicted embezzler is flirting with your sister

(adapted from Wilson 1978:57)

In this context the speaker intends to say something of the particular individual, let us call him Jones, who flirts with the hearer's sister. Compare now (41) with (42) uttered in the same context:

(42) Jones is flirting with your sister

It is clear that replacing the indefinite description with the name of the referent affects the import of the utterance. (41) draws the hearer's attention to the fact that the referent is a convicted embezzler and relies on his inferential abilities to pick out the intended referent. Uttering (42), on the other hand, the speaker refers to the particular individual she intends to speak about in a more straightforward way but does not directly focus the hearer's attention on the fact that Jones is a convicted embezzler. The descriptive content of the indefinite description in (41) together with other contextual assumptions encourages the hearer to infer that his sister is in danger, that even clever women fall for a convicted embezzler's charms and so on.

Such examples show clearly that the descriptive content of a definite or indefinite description used referentially plays a richer role than merely securing reference. This, moreover, casts doubt on the claim usually made (Donnellan 1966/1977, Searle 1979a, Récanati 1989a) that the descriptive content of a referentially used definite or indefinite description does not contribute to the proposition expressed by the utterance. I will take the position that it does.

So, my claim is that the proposition expressed by an utterance like (40), when the definite description is used referentially, is (43) below,

(43) The notoriously moody tennis player, i.e. McEnroe, threw his racquet at his opponent's head

where both the definite description and some individuating representation of the person to whom it is used to refer appear. For (43) to be true, it must be the case that the notoriously moody tennis player and *x* are the same person and that this person threw his racquet at his opponent's head.^{12,13}

¹²The same truth conditional specification is proposed by Wilson (1978).

On the other hand, when the definite description "the notoriously moody tennis player" is used attributively, the proposition expressed by (40) differs from (43) in that it does not involve an individuating representation of the intended referent. In this case the proposition expressed is true if some individual compatible with the content of the definite description exhibited bad tempered behaviour.

In the same vein, the proposition expressed by (41) on the referential interpretation will contain the descriptive content of the indefinite description "a convicted embezzler". However, it is not, intuitively, as obvious as in the case of (40), that the proposition expressed by (41) contains some individuating representation of the intended referent. I will discuss this point further in section 4.5.5.

Let me give a few more arguments to support the claim that the descriptive content of a referentially used definite or indefinite description contributes to the proposition expressed by the utterance. Consider the following utterances:

- (44) The man reading the newspaper left it behind
- (45) A woman in a white suit stained it with wine

Suppose the definite description in (44) is used referentially to pick out Smith. Suppose that (45) is addressed to the only woman in the room who wears a white suit; in this context the indefinite description is intended to pick up that particular woman. If following Donnellan, Searle and Récanati we assume that the proposition expressed is "*a* left it behind" and "*b* stained it with wine", then it is not clear how we can account for the interpretation of the anaphoric pronoun "it" and therefore the truth conditions of (44) and (45) (setting aside the possibility that *it* is deictic and takes its antecedent from the context). On the other hand, this

¹³To be more precise, (40) on the referential interpretation communicates explicitly two propositions:

- (i) The notoriously moody tennis-player, threw his racquet at his opponent's head
- (ii) McEnroe, threw his racquet at his opponent's head

problem does not arise if we assume that the descriptive content of these descriptions contributes to the propositions expressed by these utterances respectively.¹⁴

Another consideration is this. The descriptive content of a definite/indefinite description encodes conceptual information and is therefore, according to Wilson and Sperber (1993), expected to contribute either to the proposition expressed by the utterance or to one of its higher level explicatures. On the relevance view, higher level explicatures are truth evaluable representations that the speaker intends to communicate explicitly and are formed by embedding the proposition expressed by the utterance under a propositional attitude or speech act verb. Mood indicators like imperative syntax or *na*-clauses encode procedural information about propositional attitude which contributes to the construction of a higher level explicature communicated by the utterance. Sentence adverbs like "seriously" and "frankly" are examples of linguistic expressions which encode conceptual information and may contribute to one of the higher level explicatures communicated by the utterance. Definite descriptions, however, are very different from mood indicators or such adverbs: their semantics does not contain speech act or propositional attitude information. Finally, pronouns have been convincingly argued (Wilson and Sperber (1993), Kleiber (1990), Reboul (1990), and Kempson (forthcoming)) to encode procedural information about the minimal properties of a suitable referent and thus to contribute to the proposition expressed by the utterance. It is, however, very clear that the descriptive content of definite/indefinite descriptions encodes conceptual rather than procedural information.¹⁵ So, given our independently motivated pragmatic machinery, it seems that the descriptive content of a definite/indefinite description has to contribute to the proposition expressed by the utterance.

Finally, let me briefly go back to the issue of the truth conditions of utterances with referentially used descriptions. In my opinion, when a referentially interpreted definite description is used accurately (i.e. the description fits the referent), then intuitions about the possible contribution of the descriptive content

¹⁴This argument was suggested in a seminar at UCL by F.Récanati and was attributed to D.Sperber.

¹⁵Although the definite article itself might encode procedural information as argued in Kempson (forthcoming). See section 4.4.

to the truth conditions are not clear. However, when a referentially interpreted definite description is used inaccurately, then there is a very clear intuition that the speaker has said something which is false and something else which is true. Consider for example,

(46) Your sister is very beautiful

used referentially to pick out the woman who is actually the hearer's mother. The proposed formulation of the truth conditions of utterances with definite descriptions used referentially has the advantage that it captures these intuitions about the truth value of such utterances. I will pick up this issue again in section 4.5.5.

4.5.4. Relevance and the referential use

I pointed out in the last section that, contrary to what is commonly assumed, when definite/indefinite descriptions are used to pick out a particular individual or thing they very rarely serve only that function. In this section I will show how the choice of a particular definite description to guide the assignment of reference is constrained by the principle of relevance and how the principle of relevance can also accommodate those cases where the definite description seems to function solely to pick out a specific referent. For a similar relevance-theoretic account of indefinite descriptions interpreted referentially see Rouchota (1992b).

Let me reconsider one of the examples mentioned earlier:

(40) The notoriously moody tennis player threw his racquet at his opponent's head

Utterances are processed in a context. For Sperber and Wilson (1986:132-142), the context in which an utterance is processed is psychologically defined: it is understood as a set of assumptions that the individual holds and which are brought to bear on the interpretation of the utterance. Sperber and Wilson argue that the standard view that the context in which an utterance is processed is determined at the start of the act of utterance is not plausible. The context for the interpretation

of an utterance is at least partly derivable from the concepts encoded by the words used in the utterance. So, at least some of the assumptions that play a role in the interpretation of an utterance may not be accessible prior to the act of utterance. Moreover, Sperber and Wilson argue that the context in which an utterance is processed is not given but chosen: on the relevance view the intended context is chosen by the criterion of consistency with the principle of relevance, i.e. hearers select the context in which the utterance yields adequate contextual effects for no unjustifiable effort in a way the speaker could manifestly have foreseen.

Bearing this in mind, let us trace the interpretation of (40) assuming that the definite description is used referentially. Decoding the first part of the utterance, i.e. the definite description "the notoriously moody tennis player", the hearer will gain access to the corresponding concepts, i.e. he will gain access to the information stored under "notoriously", "moody", "tennis", "player". The presence of the definite article guarantees that the constructed concept is easily accessible. According to Sperber and Wilson (1986) and Wilson (to appear, b), reference assignment involves the retrieval or construction of an appropriate conceptual representation, one that uniquely identifies the intended referent. This representation is part of the proposition expressed by the utterance. The encyclopaedic information stored under the concepts encoded in the expression "the notoriously moody tennis player" helps the hearer to fix the intended referent. Assuming that (40) is part of a report on today's game of tennis between McEnroe and X and given that McEnroe is widely known for making trouble on court, the hearer will infer that the speaker intends to refer to McEnroe. The proposition expressed in this case will be "The notoriously moody tennis player, i.e. John McEnroe, threw his racquet at his opponent's head". This proposition is the most easily accessible one in the particular context that gives rise to enough contextual effects to be worth the hearer's attention. For example, given the appropriate contextual assumptions it may contextually imply that McEnroe should be banned from playing tennis, that such behaviour decreases the popularity of tennis, that McEnroe is arrogant, etc.

I have shown so far how in a straightforward case, where the intended referent fits the descriptive content of the definite description, the hearer identifies the individual about whom the speaker intends to talk. Reference assignment depends partly on the descriptive content of the definite description and is driven by the criterion of consistency with the principle of relevance. What is important is

that reference assignment, picking out the intended referent, is done in a particular way determined by the speaker's choice of the definite description.

So, the question is why does the speaker choose the particular definite description "the notoriously moody tennis player"? Certainly there are other ways, maybe even less costly ones, of referring to McEnroe, for example "McEnroe", "the American" (say X is Russian), "the former Wimbledon champion" (say X has never played at Wimbledon), etc. Well, let us think again of one of the ways in which (40) could achieve relevance. When processed against the assumption in (47), (40) will give rise to the contextual implication in (48),

(47) If tennis players repeatedly behave inappropriately on court, they should be banned from playing tennis

(48) McEnroe should be banned from playing tennis

But how does the contextual assumption in (47) come to bear on the interpretation of the utterance? Processing the expression "the notoriously moody tennis player", the hearer will not only uniquely identify McEnroe, but also he will access several assumptions about notoriously moody tennis players such as, for example, that they upset their opponents and the public, that they are aggressive people, that they are not popular among their colleagues, and most likely that they repeatedly behave inappropriately on court (this is why they are "notoriously moody"). This last assumption together with other contextual assumptions about punishing such behaviour will cause the hearer to hypothesise that the assumption in (47) may be part of the context in which the speaker intends (40) to be processed. On this analysis the first interpretation of (40) that comes to mind achieves an adequate range of effects, one of them being the contextual implication in (48), for no unjustifiable processing effort and could therefore be taken as the one intended by the speaker. So, the claim is that the descriptive content of the particular definite description that the speaker chose to use contributes to the interpretation process by giving access to part of the context in which the speaker intends the hearer to process her utterance. This is exactly why the speaker chose this description instead of any other.

Since, on the relevance view, speakers intend their utterances to cause enough changes to the hearer's representation of the world without causing

unjustifiable expenditure of processing effort, one would expect that speakers would build up their utterances in such a way that the interpretation process is to some extent guided. One way of doing this is by making sure that the right context is accessed. To put it in other words, by using the particular definite description "the notoriously moody tennis player" the speaker has already indicated the direction in which relevance is to be sought by providing the hearer with evidence that the context in which the utterance is processed should contain assumptions about notoriously moody tennis players. So, the implication in (48) is one that the speaker has encouraged the hearer to derive.

On this analysis, it is easy to see why changing the definite description *used in an utterance affects its import*. Different definite descriptions will give access to different concepts. Different concepts have different encyclopaedic entries and thus contribute to the creation of context in a different way. Compare, for example, (49) and (50) below:

(49) The moody tennis player walked off court

(50) McEnroe walked off court

Both (49) and (50) convey the information that McEnroe walked off court. Because of the particular concepts in the definite description, however, (49) succeeds in suggesting, in addition, an explanation for why McEnroe walked off court. This is not to say that in processing (50) the hearer may not infer that McEnroe's bad temper was the reason for him leaving the court. In fact, if the hearer has ever heard about McEnroe before, he is very likely to find in the encyclopaedic entry stored information about McEnroe's bad behaviour on court. So, he may construct the hypothesis that McEnroe walked off court as a result of his bad temper. The point is that in (50) the speaker gives no clear indication in her utterance that this is the way she expects it to be interpreted, i.e. she does not encourage the hearer to process her utterance in such a context. The point is that the speaker's utterance itself does not necessarily make it manifest that among the assumptions the speaker intended to communicate was an assumption about McEnroe's bad temper, which is crucial to establish the relevance of the utterance.

Now compare (40) with (51) below:

(51) The Wimbledon champion threw his racquet at his opponent's head

Suppose that in the context in which (51) is being processed the description "the Wimbledon winner" secures reference to McEnroe. Notice that the concepts encoded in this definite description do not directly give access to any assumptions about McEnroe's ongoing inappropriate behaviour. Of course, the speaker accessing the assumption that the Wimbledon winner talked about here is McEnroe may access the concept "McEnroe", which might contain information about McEnroe's frequent tantrums during tennis matches. So, (51) could give rise to the contextual implication in (48), but it would do so in a way different from (40), i.e. by first giving access to encyclopaedic information stored under the concepts encoded in the definite description. So, the context built up by (51) will be larger than the one built up by (40) because it will also contain assumptions about Wimbledon winners. So, if (51) is intended to achieve relevance by giving rise to (48), then it is more costly to process than (40). According to the principle of relevance, if the speaker chooses to utter (51), then she does not only intend to imply (48) but she also wants to say something about McEnroe as a Wimbledon champion. For example, she may wish to make mutually manifest the assumption such champions do not set the best example for younger players. Such considerations support the claim made earlier that the descriptive content of a referentially used definite description not only enables the hearer to identify the referent but may also contribute to the relevance of the utterance by helping the hearer to set up the intended context.

Are there cases where the descriptive content of the definite description plays no other role than helping to identify the referent? Yes, there are. For example, consider (52):

(52) Give this paper to the man with the belly standing by the wall

Among the set of assumptions that the speaker intends to communicate with (52) is that there is one particular man to whom this paper should be handed and this is the man standing by the wall. In such uses, definite descriptions behave very much like demonstratives. Compare:

- (53) Give this paper to that man

In such a case the speaker makes sure that the definite description she uses secures reference. That is, among all the possible ways of referring to a particular individual or thing, she will choose the one that she thinks will enable the hearer to pick out the intended referent most easily.

Such cases, where the definite description serves solely to secure reference, illustrate one type of referentially used definite descriptions. They are at the one end of the spectrum of the ways in which a speaker could make use of a referential definite description. Intermediate cases, where a definite description is used partly to secure reference and partly for other reasons, are illustrated by examples (40) and (51). At the other end of the spectrum, there are cases where securing reference is the least important of the speaker's intentions although still one of them. For example,

- (32) The fat apple pie is sitting in his usual chair
(34) The magician is in bed
(54) Peter eventually married the free ticket to the opera
(adapted from Sperber 1975:411)
(55) The block of ice just left the room
(56) The present king of France does not exist

In examples like (32), (54) and (55) the choice of the particular definite description is certainly not aimed primarily at securing reference. It is more important that the hearer recovers the speaker's attitude towards the referent, and this is the way in which the particular definite description contributes to the relevance of the whole utterance. The humorous flavour of (32) together with assumptions about how the person referred to looks and behaves, the implicit expression of contempt in (54) together with a bunch of assumptions about what kind of person Peter is, what kind of person his wife is and what sort of marriage they have, and, finally, the implicit expression of dislike in (55) together with several assumptions about the character of the person referred to, are recovered at least partly on the basis of the way the particular definite descriptions guide the hearer to build the context in which to interpret the corresponding utterances. Finally, in (34) and (56) the

speaker has a particular attitude towards the content of the description: she does not endorse it, but rather attributes it to someone else.¹⁶

To sum up, so far I have argued (a) that the descriptive content of definite/indefinite descriptions used referentially contributes to the proposition expressed by the utterances containing them and (b) that the standard assumption that referentially used definite and indefinite descriptions only serve to pick out a certain individual is not correct. Definite and indefinite descriptions used to secure reference rarely have only this purpose in communication. Usually, in addition to referring to a specific individual or thing, such descriptions help the hearer build up the context in which the speaker intends her utterance to be interpreted and thus give rise to contextual effects which a different description would not.¹⁷

¹⁶For a relevance-theoretic account of the way the examples in the last paragraph are interpreted see Rouchota (1992a:158-160), Sperber and Wilson (1983:64-66) and Wilson (1991a). Roughly, the idea is that the definite descriptions in (34) and (56) are used attributively (in the relevance theoretic sense, see chapter 3). Utterances like (32), (54) and (55), on the other hand, are similar to metaphorical utterances in that they are interpretations of complex thoughts (see chapter 3). For example, uttering (32), the speaker intends to make manifest a wide range of implicatures like "this man is always eating apple pies", "this man is very fat", "he almost looks like an apple pie", "the speaker does not like people who cannot control their appetite", etc. For a discussion of the issues relating to existential presupposition usually raised in connection with utterances like (56) see Atlas (1989) and Burton-Roberts (1989).

¹⁷Carston (1993b) builds on the ideas argued for here and in Rouchota (1992a:158). She argues that an implication like "McEnroe is the notoriously moody tennis player" while a part of the truth-conditional content (proposition expressed) plays a background role, i.e. it is not relevant in its own right, but may in addition to helping the hearer secure reference, make more accessible the intended context. According to Sperber and Wilson (1986: 202-217), background implications do not have contextual effects of their own but contribute to overall relevance in some other way, for example by increasing the accessibility of a context in which effects can be achieved and thus reducing the processing effort needed to achieve those effects. As I showed in this section, this is exactly how the descriptive content of a definite or indefinite description contributes to the interpretation process when the description is used referentially.

4.5.5. The referential use and explicit content

The issue I want to discuss in this section is the status of the singular assumption "a is G" which is communicated when a definite or an indefinite description is interpreted referentially.

In a Gricean framework like that proposed in Neale (1990) for definite descriptions and assumed in Ludlow and Neale (1991) for indefinite descriptions, this proposition is a conversational implicature derived via the maxim of relevance and quality. For example, consider the referential interpretation of (1), repeated below, when uttered in the court of justice to pick out Perkins.

(1) The murderer of Smith is insane

Applying Neale's (1990:89) analysis for the referential use of definite descriptions we get:

(a) The speaker has expressed the proposition "there is a unique x such that x is Smith's murderer and x is insane

(b) There is no reason to suppose that the speaker is not observing the CP and maxims.

(c) The speaker could not be doing so unless she thought that Perkins is insane. On the assumption that the speaker is observing the maxim of relation, she must be attempting to convey something beyond the general proposition that whoever is uniquely Smith's murderer is insane. On the assumption that the speaker is adhering to the maxim of Quality, she must have adequate evidence for thinking that Smith's murderer is insane. The hearer knows that the speaker knows that Perkins is Smith's murderer, therefore the speaker thinks that Perkins is insane.

(d) The speaker knows (and knows that the hearer knows that she knows) that the hearer knows that Perkins is Smith's murderer, that the hearer knows that the speaker knows that Perkins is insane and that the hearer can see that the speaker thinks the supposition that she thinks that "Perkins is insane" is required.

(e) The speaker has done nothing to stop the hearer thinking that Perkins is insane.

- (f) The speaker intends the hearer to think, or is at least willing to allow the hearer to think, that Perkins is insane.
- (g) The speaker has implicated that Perkins is insane.

This analysis inherits the problems of the Gricean framework within which it is placed. Both the maxim of relation and the maxim of quality on which this analysis depends are problematic (Sperber and Wilson 1986:31-38 and Wilson and Sperber 1981). I will show shortly that a much more adequate analysis can be given within relevance theory.

The other problem with this analysis is that it does not capture the intuition discussed in sections 4.3.2 and 4.5.3 that when a definite description is used referentially the intended referent (or rather some individuated representation of it) contributes to the truth conditions of the utterance.

Let us go back to Grice's original account of the referential-attributive distinction. According to Grice, the truth-conditions of utterances with definite descriptions, whether attributively or referentially used, are identical, and given by the Russellian account ('with suitable provision for unexpressed restrictions to cover cases in which, for example, someone uses the phrase "the table" meaning thereby "the table in this room"', Grice 1969: 142). Grice clearly views Donnellan's distinction as falling within the domain of pragmatics. Discussing the referential use of the example "Jones' butler mixed up the hats and the coats", Grice (1969: 142) argues that 'if the speaker has used [referentially] a descriptive phrase (i.e. "Jones' butler") which in fact has no application, then what the speaker has *said* will, strictly speaking, be false... but what he *meant* may be true (for example, that a certain particular individual [who is in fact Jones' gardener] mixed up the hats and coats)'. So, Grice takes the proposition that a certain individual mixed up the hats and the coats to be an implicature of the utterance "Jones' butler mixed up the hats and coats". Although Grice does not explain which of his maxims play a role in the derivation of such an implicature, the obvious candidate seems to be the maxim of relation. This is the line of analysis developed by Neale (1990).

Notice, however, that the claim that a speaker uttering "Jones' butler mixed up the hats and the coats" intended to *imply* that a certain individual mixed up the hats and the coats is slightly odd in a Gricean framework because it does not mesh with Grice's definition of "what is said". In *Logic and Conversation* Grice

(1975/1989: 25) defines the level of "what is said" as follows: "But for a full identification of what the speaker had said, one would need to know (a) the identity of X, (b) the time of utterance, and (c) the meaning, on the particular occasion of utterance of the phrase *in the grip of a vice*."¹⁸ Moreover, remember that, according to Grice, reference assignment is a contextually determined procedure which contributes to the level of "what is said" rather than to the level of "what is implicated". Now, the characteristic property of definite descriptions referentially used is that the hearer is intended to identify the referent. In the example that Grice discusses the speaker intended to say something of a certain individual whom she (mistakenly in this case) believed to be Jones' butler. What the hearer is expected to do in this case is to fix the referent. This suggests that the referential use of definite descriptions is a case where the hearer has to assign reference. As such it is a pragmatically determined aspect of the interpretation which contributes to the explicitly communicated content of an utterance.¹⁹

This is the position I assumed in the last two sections. Some representation of the intended referent is part of the proposition expressed by an utterance with a referentially interpreted definite description. So, not only the concepts encoded in the definite description but also the intended referent contributes to the basic explicature of the utterance (see footnote 13).

Let's take an example and follow the interpretation process. Suppose A and B are lecturers and have been discussing in the secretary's room what they ought to do with old exam papers. None of them knows what to do. At that point the Head of the department, Professor Darby, comes into the room. A pointing at Professor Darby turns to B and utters (57):

(57) The Head of the Department will know

¹⁸It would only be fair, however, to mention here that Grice goes on to say: "This brief indication of my use of *say* leaves it open whether a man who says (today) *Harold Wilson is a great man* and another who says (also today) *The British Prime Minister is a great man* would, if each knew that the two singular terms had the same reference, have said the same thing". (Grice 1975/1989: 25).

¹⁹It is interesting to note here that in his later paper "Presupposition and Conversational Implicature" Grice suggests that definite descriptions may be best treated semantically as "a special subclass of referential expressions" (Grice 1981: 198), though, admittedly, at the very end of an analysis built on the Russelian semantics.

Processing the definite description "the Head of the Department", the hearer will gain access to the corresponding concepts. In this context, the interpretation on which (57) expresses the proposition "The Head of the Department, whoever he is, will know what to do with the old exam papers", cannot be the intended one because it doesn't satisfy the hearer's expectation of relevance in this context. On the basis of the linguistically encoded content of the description and other contextual assumptions, such as that the speaker is pointing to Professor Darby and that Professor Darby is the Head of the department, the hearer will easily infer that the speaker intends to say something of Professor Darby. So, the proposition expressed by (57) is "the Head of the Department, i.e. Professor Darby, will know what to do with the old exam papers". On this interpretation the utterance is optimally relevant. This piece of information is worth the hearer's attention in this context because it gives rise to an adequate range of contextual effects for no unjustifiable effort: since Professor Darby will know what to do with these documents, A and B can now find out what they ought to do and get on with their work. Notice in addition that, on this interpretation, (57) not only succeeds in communicating something about a particular individual, but it also suggests an explanation for why the intended referent will know what to do with the old exam papers (because he is the Head of the Department).²⁰

I have so far analysed the referential interpretation of a definite description as a pragmatically determined aspect of utterance interpretation which contributes to the proposition expressed by the utterance. I have also shown how we can provide a psychologically plausible pragmatic account of the referential

²⁰Having argued for an explicature analysis of the referential use of definite descriptions, it is interesting to compare, as was noted by Carston (1993b), the interpretation of utterances like these:

- (i) Smith's murderer is insane (referential interpretation)
- (ii) Perkins is Smith's murderer and he is insane

Carston (1993b) points out that (i)-(ii) seem to be truth conditionally equivalent but clearly they differ in pragmatic terms, i.e. in the effects they achieve and the allocation of processing effort they require. More examples, I think, can be added to this list:

- (iii) Smith's murderer, Perkins, is insane
- (iv) Perkins, Smith's murderer, is insane
- (v) Perkins is Smith's murderer. He is insane

interpretation of definite descriptions within relevance theory. The idea is that the hearer will assign reference and thus enrich further the proposition expressed by an utterance with a definite description whenever the result of the standard enrichments (building in the existential implication and taking into account the implication of uniqueness) is too weak to be consistent with the principle of relevance. Let's now turn to the referential use of indefinite descriptions.

Consider again the example in (41):

(41) A convicted embezzler is flirting with your sister

when the hearer is intended to identify Jones as the person flirting with his sister.

In a Gricean framework, such as the one developed by Neale (1990) and Ludlow and Neale (1991), the proposition "Jones is flirting with your sister" would be a conversational implicature derived through the maxim of relation. The derivation of this implicature would be similar to the one presented earlier for definite descriptions and would face the same problems. A much more adequate account can be given within relevance theory.

On the relevance view, processing the indefinite description in (41) involves setting up a representation constrained by the concepts CONVICTED and EMBEZZLER. According to the context given earlier for (41), the hearer knows that Jones is a convicted embezzler. So, gaining access to the concepts CONVICTED and EMBEZZLER, he is likely to retrieve the assumption that Jones is a convicted embezzler. The concept "Jones" itself must be easily accessible to the hearer since, according to the context, he has noticed that Jones is at the party. So, he may construct the hypothesis that the speaker intends to communicate something about Jones, namely that Jones is flirting with his sister. This hypothesis about the intended interpretation of (41) is clearly the easiest one to construct in this context. Moreover, it gives rise to a wide range of effects which make it worth the hearer's attention. For example, it may yield the contextual implication that the hearer's sister should be warned, it may strengthen the hearer's prior belief that Jones takes advantage of women who fall for his charms, it may contradict and eliminate the hearer's belief that his sister never talks to strangers and so on and so forth. Since on this interpretation the utterance in (41) yields enough contextual effects

without putting the hearer to unjustified effort, this is the interpretation the hearer will recover.

Notice that, on this view, the proposition "Jones is flirting with your sister" is a contextual implication inferentially derived from the interaction between the proposition expressed by the utterance, "there is an x, x is a convicted embezzler and x is flirting with your sister", and other assumptions such as that Jones is a convicted embezzler, that there is no other convicted embezzler around and that the speaker is talking about some person in the room. Why is the proposition communicated on the referential interpretation of an indefinite description an implicature of the utterance?

The main argument for analysing the referential interpretation of a definite description as contributing to the basic explicature of the utterance is that the representation of the intended referent contributes to the truth-conditions of the utterance (Donnellan 1966/1977, Searle 1979a, Récanati 1989a, 1993, Rouchota 1992a, etc.). In the same vein, the main argument for treating the referential interpretation of an indefinite description as contributing to the implicatures of an utterance is the intuition that the representation of the intended referent does not contribute to the truth conditions of the utterance (Ludlow and Neale 1991, Récanati 1989a, Rouchota 1992b). Unfortunately, however, people's intuitions about the truth conditions of utterances containing referentially used definite and indefinite descriptions are fuzzy. So, in contrast to the authors mentioned above, Grice (1969) claims that the intended referent does not contribute to "what is said" by an utterance with a referentially interpreted definite description, and Chastain (1975), Stich (1986), etc. believe that the intended referent does contribute to the truth conditions of an utterance with a referentially used indefinite description. Clearly, what we need is a way of sharpening our intuitions about the truth-conditions of such utterances.

One way of checking our intuitions about the truth-conditions of utterances is the scope test. This has also been used effectively by Carston (1988) in connection with conjoined sentences, Wilson (1991b) and Ifantidou (1993a, 1993b) in connection with adverbials and parentheticals.²¹ Genuine conversational implicatures as defined by Grice do not fall under the scope of logical operators.

²¹For discussion of the scope test see also Récanati (1989a) and Récanati (1993:269-274).

So, for example, Cohen (1971) argued that the temporal connotation often carried by a conjunction is not a genuine conversational implicature by showing that the result of embedding a conjunction and its reversed counterpart under the scope of conditionals with contradictory consequents is not a contradictory sentence. So,

- (58) If the old king died from a heart attack and a republic was declared Sam will be happy, but if a republic was declared and the old king died of a heart attack Sam will be unhappy

Trying to do something similar with indefinite descriptions we get:

- (59) If a convicted embezzler is flirting with your sister, then we should warn her, but if a convicted embezzler is flirting with your sister then we need not warn her

This conjunction of conditionals forms a contradictory utterance which suggests that the information that Jones is flirting with your sister is not part of the explicitly communicated content of (41). So, the scope test seems to justify the analysis of the referential use of indefinite descriptions as contributing to the implicitly communicated content of an utterance. Application of the same test on the referential use of definite descriptions, however, suggests that it is an implicature too. Consider (60):

- (60) If Smith's murderer is insane then we should put him in a separate cell, but if Smith's murderer is insane then we need not put him in a cell

or,

- (61) It is always the same in detective stories: either Smith's murderer is insane or Smith's murderer is insane

The conditional is contradictory and the disjunction is redundant.

Despite these results, however, there are some reasons for not abandoning the explicature analysis of the referential use of definite descriptions. First, I want

to point out that the way we applied the scope test in the last paragraph will not give us reliable results, since an utterance with a referentially interpreted description always entails the corresponding utterance with an attributively interpreted description ("The murderer of Smith, Perkins, is insane" entails "The murderer of Smith is insane"). Second, I will show that if we apply the test in a slightly different way, there are some indications that at least the referential interpretation of definite descriptions should be seen as contributing to the proposition expressed by the utterance.

In order to test whether an adverb like "allegedly" contributes to the truth-conditions of an utterance like "Allegedly, the ball was over the line", Wilson (1991b) asks under what conditions the following conditional is true:

(62) If the ball was allegedly over the line, we should not count the point

Should we not count the point if the ball was over the line, or should we not count the point if it was alleged that the ball was over the line. The latter is right, so "allegedly" contributes to the truth conditions of the utterance. We can use the scope test in the same way for the referential interpretation of definite descriptions. Suppose for example, that Perkins is accused of Smith's murderer. He's been interrogated for hours. In the end, the officer in charge says:

(63) If Smith's murderer is insane, then we should stop this interrogation

The person they are interrogating is Perkins. Bearing this in mind one should ask: under what conditions should they stop the interrogation they are carrying out? If Smith's murderer, whoever he is, is insane or if Perkins is insane? Obviously, they should stop their interrogation if Perkins is insane. The scope test suggests that the referential interpretation of a definite description contributes to the proposition expressed by the utterance. The test may be applied in the same way in connection with indefinite descriptions. So, suppose that at a party witnessing Jones, whom we both know to be a convicted embezzler, flirting with your sister I say to you

- (64) If a convicted embezzler is flirting with your sister then you should take her out of here as quickly as possible

Under what circumstances should you take your sister away from this party? If Jones is flirting with her, or if any convicted embezzler is flirting with her? Judgements here are not very clear. I would probably say that you should take your sister away in case any convicted embezzler is flirting with her. This suggests that the referential interpretation of indefinite descriptions does not contribute to the proposition expressed by the utterance.

So, it seems that the scope test may provide us with some evidence that while the referential interpretation of definite descriptions contributes to the proposition expressed, the referential understanding of indefinites is implicated. In any case we are clearly in need of further tests or criteria to distinguish between pragmatically determined aspects of meaning which contribute to the explicature(s) and those pragmatically determined aspects of meaning which contribute to the implicatures of an utterance. It might turn out on the basis of more reliable tests that the referential interpretation of both definite and indefinite descriptions can be accounted for in parallel as contributing to the explicitly communicated content of an utterance or that the status of the referential interpretation is different in the two cases.²²

4.6 Summary

In this chapter I have argued that definite and indefinite descriptions are not semantically ambiguous between the referential, the attributive and the specific

²²An issue that has not been taken up here is whether the specific interpretation of definite and indefinite descriptions contributes to the explicitly or the implicitly communicated content of an utterance. In section 4.5.2 I have analysed the specific interpretation as contributing to the implicitly communicated content of the utterance. This, however, might turn out to be wrong once we have a full set of criteria to distinguish between explicitly and implicitly communicated aspects of utterance interpretation. Another issue that has not been discussed here is the differences in meaning (if any) between an utterance with a referentially interpreted definite description and an utterance with a referentially interpreted indefinite description. For some preliminary remarks see Rouchota (1992b: 290-291).

interpretation. I took the position that definite and indefinite descriptions are referring expressions instructing the hearer to build up a representation in line with their descriptive content. The semantic difference between definite and indefinite descriptions is that definite descriptions guarantee that the representation the hearer is expected to build is easily accessible. I have argued that assuming this semantics we can account for the several uses/interpretations definite and indefinite descriptions may have in pragmatic terms. I have discussed in greater detail the referential interpretation of definite and indefinite descriptions. I have argued that referentially interpreted definite and indefinite descriptions are seldom used simply as tools for picking out the intended referent. Usually, in addition to referring to a specific individual or thing, definite and indefinite descriptions help the hearer build the context in which the speaker intends her utterance to be processed and thus give rise to contextual effects which a different description would not. I have also argued that the referential interpretation of at least definite descriptions may be viewed as contributing to the explicitly communicated content of an utterance. In the next chapter I will investigate the way in which the interpretation of definite and indefinite descriptions interacts with the interpretation of *na*-clauses in the grammatical environment of restrictive relative clauses.

CHAPTER 5

THE INTERPRETATION OF NON *na*- AND *na*-RESTRICTIVE RELATIVES

5.1. Introduction

It has been argued with respect to many languages (Spanish, Romanian, French), where there is a distinction between the indicative and the subjunctive mood, that the choice of mood in a restrictive relative clause modifying a definite or indefinite description reflects Donnellan's referential-attributive distinction: indicative restrictive relatives are claimed to somehow force the referential interpretation whereas subjunctive restrictive relatives impose the attributive interpretation. This is often brought forward as evidence for the claim that the referential-attributive distinction does not belong to the area of pragmatics but rather is a case of semantic or even syntactic ambiguity (Hintikka 1969, Rivero 1975, Farkas 1985).

Similar observations have been put forward by Veloudis (1985) with respect to indicative and subjunctive restrictive relatives in Modern Greek in the context of intensional operators, i.e. propositional attitude verbs, future tense in its modal interpretations, negation, interrogatives, imperatives and conditionals. Restrictive relatives in the subjunctive may only occur in the context of one of these operators, as we will see. Veloudis (1985:123-129) takes over the claim often made in the literature that the referential-attributive and the specific-nonspecific distinctions coincide. He then argues that a definite description followed by a non *na*-RR, like the one in (1), can be interpreted referentially/specifically only:

- (1) O Janis theli na pantrefti tin kopela pou ehi ble matia
The John want-3s na marry-3s-PF the girl-acc that has blue eyes
John wants to marry the girl who has blue eyes

Note here that a definite description may not be followed by a *na*-RR:

- (2) *O Janis theli na pantrefti tin kopela pou na ehi ble matia
The John wants na marry-3s-PF the girl who na has blue eyes
John wants to marry the girl who has blue eyes

Sentences like (2) are ungrammatical. For a syntactic account of such sentences see Manzini (1994: 20). An indefinite description followed by a non *na*-RR, like the one in (3), may be interpreted either referentially/specifically or attributively/nonspecifically:

- (3) O Janis theli na pantrefti mia kopela pou ehi ble matia
 The John want-3s na marry-es-PF a girl that has blue eyes
 John wants to marry a girl who has blue eyes

Finally, an indefinite description followed by a *na*-RR, like the one in (4), can be interpreted attributively/nonspecifically only:

- (4) O Janis theli na pantrefti mia kopela pou na ehi ble matia
 The John want-3s na marry-3s-PF a girl that na has blue eyes
 John wants to marry a girl who would have blue eyes^{1,2}

I argued in chapter 4 that the referential-attributive distinction does not coincide with the specific-nonspecific and that it lies within the area of pragmatics. Here, I will show that, contrary to what Veloudis claims, definite descriptions in utterances like (1) may be interpreted either referentially or attributively. As for the necessarily attributive interpretation of the noun phrase in (3), I will argue that it is a direct consequence of the semantics of *na*-clauses. With regard to what Veloudis calls the specific-nonspecific distinction, I will argue that to the extent that it has to do with the applicability of the rule of existential generalisation, it is to some extent captured by the choice between a *na*- and a non *na*-relative. Finally, I will show that, contrary to what Veloudis claims, a *na*-RR does not encode or force in any way the interpretation on which the grammatical subject is taken to be responsible

¹*pou* in its grammatical function of a relative pronoun is unspecified for gender and number. The non *na*- and *na*- restrictive relatives discussed in this chapter may be introduced either with *pou* or the normal relative pronoun *o opios*, *i opia*, *to opio* which is marked for gender and number.

²In Modern Greek *na*-relatives may be either restrictive relatives or purpose relatives. The discussion in this chapter concerns only *na*-restrictive relatives. Veloudis (1985:113-114) offers a list of properties with respect to which *na*-restrictive relatives are distinguished from *na*-purpose relatives.

for the content of the relative. I will argue that whether the content of the relative is understood to be originating from the subject or the speaker depends on considerations of optimal relevance.

5.2. Grammaticalisation of the referential-attributive distinction?

5.2.1. Definite descriptions and non *na*-restrictive relatives

Veloudis (1985) claims that in certain linguistic environments, the so-called "intensional contexts", i.e. propositional attitude verbs, negation, future tense in its modal interpretations, imperatives, *na*-clauses with imperational force, questions, hypothetical conditionals and counterfactuals, definite descriptions followed by non-*na*-RRs are interpreted referentially only. Similar claims have been made for Spanish (Rivero 1975). Here are a few examples from Modern Greek:

- (5) Psahno ti gineka pou ine magisa
look-1s for the woman-acc that is witch
I am looking for the woman who is a witch
- (6) Den sibatho ton ergati pou kiklofori afta ta filladia
Not like-1s the worker-acc that distributes these leaflets
I do not like the worker who distributes these leaflets
- (7) Tha apolisi ton ergati pou kiklofori afta ta filladia
will fire-3s the worker-acc that distributes these leaflets
He will fire the worker who distributes these leaflets
- (8) Protine/Na protinis ti lisi pou ehi polla pleonektimata
Propose/na propose-2s-IMP the solution-acc that has many advantages
Propose/You should propose the solution which has many advantages

(9) An ihe mialo tha ihe pantrefti ti gineka pou ehi lefta
 if had-3s brain will had married-3s the woman-acc that has money
 If he had any brains he would have married the woman who has money

(10) Vrikes ton kathigiti pou bori na kathodigisi tin erevna sou?
 Found-2s the professor-acc that can na supervise the research yours
 Did you find the professor who can supervise your research?

(11) Ean entopisoume sintoma ton anthropo pou prodidi ta mistika tis
 If locate-1pl soon the man that betrays the secrets of

eterias mas, tha boresoume na prohorisoume me ta shedia mas
 company ours will be able-1pl na go ahead-1pl with the plans ours

If we identify the man who betrays the secrets of our company soon, we
 will be able to go ahead with our plans

Note, first of all, that, if there are no intensional operators in a sentence, definite descriptions followed by non *na*-RRs may be interpreted either attributively or referentially, as we would expect given the pragmatic nature of Donnellan's distinction. Suppose, for example, that our car was stolen and we still do not know who the thief was. There is, however, evidence that the thief is lefthanded. Under these circumstances, I can very well utter (12a) to inform you of the progress of the investigation:

(12a) O anthropos pou eklepse to aftokinito mas ine aristerohir
 The man that stole-3s the car our is left handed
 The man who stole our car is lefthanded

In this context the definite description modified by the RR is used attributively: all a rational speaker could have intended to communicate is that the man who stole our car, whoever he is, is lefthanded. Suppose now that you and I know a car-mechanic, Mr Flip, who is very good. We are now with John whose car has broken

down, and none of the mechanics he has consulted has been able to repair it. In this context I may say to you:

(12b) O anthropos pou hriazete o Janis den ine edo

The man that need-3s the John not is here

The man that John needs is not here

In this context the definite description will be interpreted referentially; you, the hearer, will understand that I am talking about Mr Flip.

Given such examples, there is no reason to assume a priori that definite descriptions followed by non *na*-RRs in MG admit only of a referential interpretation. Let us now return to Veloudis's claim regarding intensional contexts. Is it true that the noun phrases in (5)-(11) can be understood referentially only?

The noun phrases in the examples in (5)-(9) certainly allow a referential interpretation. They may be interpreted as picking out a particular referent given a suitable context and considerations of relevance. So, for example, if we both believe Jane to be a witch, I may, under certain circumstances, utter (5) expecting you to infer that I am looking for Jane. If we both know that the worker who distributes these leaflets is Peter, I may utter (6) intending you to understand that I do not like Peter, or (7) expecting you to identify Peter as the person who is going to be fired. Finally, consider (8). Suppose that you have just told me that there are two ways to solve a particular problem and that we both agree on one of them as being most advantageous. Uttering (8) in this context I will probably be understood as advising you to propose that particular solution.

Notice, however, that the referential interpretation seems hardly available for the examples (10) and (11). Let me start with (11). Assuming that both speaker and hearer do not yet know who the man who betrays the secrets of their company is, which seems to be the most natural interpretation of the antecedent of the conditional, the definite description could never be intended to be interpreted referentially. The definite description followed by the non *na*-RR in (10) is also rather unlikely to be interpreted referentially. Since the speaker is *asking* whether the hearer found the professor who can supervise his research, she may not even know whether such a person exists at all. And even if she has reason to believe that there is such a person, she probably does not know who this person is, so,

she could not have used the noun phrase referentially. In these two examples the information linguistically encoded in the utterance itself seems to impose the attributive interpretation of the noun phrase. The existence of such examples strongly suggests that definite descriptions followed by non *na*-RR in the environment of the so-called intensional operators may be used attributively given a suitable context. In fact, the attributive interpretation is the most natural interpretation in all of the examples in (5)-(11).³

The usual way of paraphrasing the attributive use of a definite description is by adding the phrase "whoever he/she/it is". So, one way of checking whether the noun phrases in (5)-(9) admit of an attributive interpretation is to see whether these utterances are still acceptable when followed by the test phrase. And, indeed, they are as the English glosses show:

- (5') Psahno ti gineka pou ine magisa, opia ki an ine
 look for-1s the woman-acc that be-3s witch, whoever and if be-3s
 I am looking for the woman who is a witch, whoever she is/might be
- (6') Den sibatho ton ergati pou kiklofori afta ta filladia, opios ki an ine
 Not like-1s the worker-acc that distribute-3s these leaflets, whoever and if
 be-3s
 I do not like the worker who distributes these leaflets, whoever he is/might be
- (7') Tha apolisi ton ergati pou kiklofori afta ta filladia, opios ki an ine
 will fire-3s the worker-acc that distribute-3s these leaflets, whoever and if
 be-3s
 She will fire the worker who distributes these leaflets, whoever he is/might be

³Note that a referential interpretation of the noun phrase in (10) does not seem altogether excluded. Suppose for example that we both know that Prof. Foggy is the man who can supervise your research. Suppose further that you have suddenly lost all contact with him, he has disappeared. If I utter (10) in this context, I will be asking you whether you traced Prof. Foggy and the noun phrase will be used referentially. Such observations simply strengthen the claim argued for in this section that whether a definite description modified by a non *na*-RR is to be interpreted referentially or attributively depends on pragmatic considerations.

- (8') Protine/Na protinis ti lisi pou ehi polla pleonektimata, opia ki an ine
 Propose/na propose-2s the solution-acc that have-3s many advantages,
 whichever and if be-3s
 Propose/You should propose the solution which has many advantages,
 whichever it is/might be
- (9') An ihe mialo tha ihe pantrefti ti gineka pou ehi lefta, opia ki an ine
 if had-3s brain will had married-3s the woman-acc that have-3s money,
 whoever and if be-3s
 If he had any brains he would have married the woman who has money,
 whoever she is/may be

The fact that (5')-(9') are possible paraphrases of (5)-(9) provides evidence that the noun phrases in these utterances may very well be interpreted attributively⁴.

The next step is to try to find contexts in which the noun phrases in utterances like those in (5)-(9) are indeed interpreted attributively. Let's take (5). Suppose that I am a private detective and for some time now I have been looking for the woman who is a witch. I still have no clues as to who she is or what she looks like. I have been informed, however, that she will be at this party. So, I take one of my assistants who is familiar with the story and go to this party. Later my assistant finds me in the cellar and, surprised, he asks what I am doing there. I answer with (5). In this context, since neither speaker nor hearer have an individuated representation of this woman, the definite description followed by the RR cannot but be interpreted attributively. Similar contexts where the attributive interpretation is the only one available can be worked out for the examples (6)-(9).

⁴Certain doubts may be expressed with regard to the reliability of this test because the phrase "whoever he/she/it is" may accompany a definite description when it is used referentially, as in (i) below:

- (i) I will sue the man whom we both saw stealing the money whoever he is/might be

In cases like (i) the phrase "whoever he is" may mean "despite/no matter who he is". This is not, however, the interpretation that this phrase is intended to have in (5')-(9'). In these examples it simply indicates that the speaker does not have a particular individual in mind.

Moreover, one could think of contexts for utterances like those in (5)-(9) where, although speaker and hearer do have an individuated representation of the referent satisfying the description, the recovery of this representation is not necessary for the utterance to be consistent with the principle of relevance and so the noun phrase is interpreted attributively. Let's take, for example, (6). Suppose that A and B know that John has recently been circulating certain leaflets which upset the director of the company. As a result, John is going to be fired. Later at the pub the following conversation takes place between A and B:

(13) A: Den sibatho tous diefthintes san ton diko mas
I do not like directors who behave like ours

B: Giati? Ti ekane?
Why? What did he do? (What's wrong with him?)

A: Gia paradigma, tha apolisi ton ergati pou kiklofori afta ta filadia.
For example, will fire-3s the worker-acc that circulates these the leaflets
For example, he will fire the worker who circulates these leaflets

In this context A's intention in using the definite description followed by the restrictive relative is not to pick out John. Notice that the way I set up the context A knows that B knows that John is going to be fired. So A would not be intending to communicate the proposition "the director will fire John". The point of A's utterance is to explain why she doesn't like the director. So, what she intends to communicate is that the director is the kind of person who would fire someone because he circulates certain leaflets. In this case, though the referential interpretation is available, the utterance is consistent with the principle of relevance when the noun phrase is interpreted attributively, which, in this context, is the first interpretation to come to mind. So, this is the interpretation the hearer will choose.

Finally, it is noticeable that in all the examples I have used so far and in all the examples Veloudis discusses the definite description followed by the non *na*-RR occurs in object position. However, definite descriptions in subject position, the position with respect to which the referential-attributive distinction was originally discussed, may be followed by a non *na*-RR as we can see from (14):

- (14) a. To koritsi pou ehi ksantha malia den eftase akoma
the girl who has blonde hair not arrived-3s yet
The girl who has blonde hair hasn't arrived yet
- b. To koritsi pou milai tris gloses tha vri efkola doulia
the girl who speak-3s three languages will find easy work
The girl who speaks three languages will find work easy

As expected, the definite descriptions in (14) may be interpreted either attributively or referentially depending on the context and considerations of optimal relevance.

I have shown in this section that contrary to what Veloudis (1985) claims, the referential use of definite descriptions is not grammaticalised in MG by the use of definite descriptions followed by non *na*-RRs in intensional contexts. Definite descriptions modified by non *na*-RRs may be interpreted either attributively or referentially depending on the context and considerations of relevance.

Let me finish by pointing out that analyses of the relevant Spanish (Rojas 1977, Rivero 1977) and French (Pavel 1976, Kleiber 1987) data show that definite descriptions followed by indicative restrictive relatives in these languages may also be interpreted referentially or attributively depending on the context. For example, here is what Pavel (1976:147) says for the definite description followed by the indicative relative in (15):

- (15) Je cherche la femme qui peut m'aimer
I am looking for the woman who can love me

"In [(15)] *la femme qui peut m'aimer* is not always referentially used. To be sure I can designate Martine *la femme qui peut m'aimer* and then tell her brother using [(15)] that I am looking for Martine. But I could just as well be an unhappy optimist looking for the unique woman able to love me. [(15)] would be equally appropriate for this use which is manifestly attributive."

5.2.2. Indefinite descriptions and non *na*-restrictive relatives

As one would expect given the pragmatic nature of the referential-attributive distinction, indefinite descriptions followed by non *na*-RRs in non-intensional contexts, like the one in (16), may be used either attributively or referentially.

- (16) Pirane aftes tis plirofories apo enan astronauti pou epestrepse htas apo to fegari
took-3pl these the informations from an astronaut that returned-3s yesterday from the moon
They obtained this information from an astronaut who returned from the moon yesterday

The speaker in (16) may either intend the hearer to pick out a particular astronaut or she may simply intend to point out that it was an astronaut (rather than, for example, a geologist) who provided the information in question.

As Veloudis (1985) says, indefinite descriptions modified by a non *na*-RR in intensional linguistic contexts may be interpreted either referentially or attributively. To take one example, consider (17) below,

- (17) Thelo na horepso me ena nearo pou aristepse stis eksetasis tou
want-I to dance with a young that took a first in exams his
I want to dance with a young man who took a first in his exams

Say that the speaker has been invited to a party where there will be lots of young men who have done well in their exams. The speaker does not know any of these brilliant young men, she only knows the person who organises the party. When asked why she is going to this party, the speaker may utter (17). All she could have intended to communicate in this context is that she wants to dance with some young man (or other) who has taken a first. The indefinite description followed by the non *na*-RR is used attributively. Suppose now that the speaker addresses (17) to Peter who took a first in his exams and who knows that the speaker wants to dance with him, because, for example, she has been flirting with him for some time. In this context the noun phrase *a young man who took a first in his exams*

may be interpreted referentially. The speaker intends to communicate that she wants to dance with Peter.

Despite examples like (17), it may seem that indefinite descriptions followed by non *na*-RR in intensional contexts tend to be interpreted attributively. Consider, for example, the following utterances:

(18) *Na pantreftis mia gineka pou ine eksipni*
Na marry-2s-PF a woman that is clever
You should marry a woman who is clever

(19) *An itan eksipnos o Janis tha pigene se ena panepistimio pou ine gnosto*
If were-3s clever the John will go-3s to a university that is well-known
If John were clever he would go to a university which is well-known

There are two considerations here. First, the fact that the indefinite descriptions in (18) and (19) tend to be interpreted attributively is not surprising on the relevance-oriented analysis I developed in chapter 4. The referential interpretation requires the hearer to take an extra inferential step, i.e. to recover or construct an individuating representation of the intended referent. The hearer will derive this implicature, if this interpretation is the first one that comes to mind and yields adequate contextual effects. There is, however, nothing in the context set up by (18) and (19) that suggests that the referential interpretation was the one the hearer was supposed to recover. In simple words, if there is no reason for the hearer to derive the referential interpretation, then he will not. Placed in a suitable context, on the other hand, the speaker of (18) may communicate that his hearer should marry a particular woman, say Jane, who is clever, and the speaker of (19) may communicate that if John was clever he would go to a particular university, say UCL, which is well known.

Second, indefinite descriptions are less susceptible to the referential use than definite descriptions, independently of whether they occur in intensional or extensional linguistic environments. Picking out a uniquely identified individual/object presupposes that it is accessible to both speaker and hearer. Now remember that the definite article guarantees the accessibility and uniqueness of the representation the hearer is expected to set up. As a result, the possibility of

the referential interpretation of definite descriptions is easy to entertain even in the absence of particular contextual information. Indefinite descriptions, on the other hand, carry no guarantee of accessibility. For an indefinite description to be interpreted referentially both accessibility and uniqueness are a function of the context. As a result, in the absence of suitable contextual information it is not easy to entertain the possibility of the referential interpretation of an indefinite description. So, the intuition that indefinite descriptions followed by non *na*-RR in intensional contexts do not trigger the referential interpretation as easily as definite descriptions, in the absence of specific contextual information, can be explained as an instance of a more general tendency.

5.2.3. *Na*-restrictive relatives

I have shown in the previous sections that the choice of a non *na*-RR as a modifier for a definite or an indefinite description does not inevitably lead to the referential interpretation of the noun phrase. Let me now turn to *na*-restrictive relatives. It is correctly pointed out by Veloudis (1985) that indefinite descriptions followed by *na*-RRs admit only of the attributive interpretation. I am going to argue in this section that this is a direct consequence of the semantics of *na*-clauses as defined in chapter 1. (Recall that, as I mentioned in the introduction, *na*-RRs may occur in the scope of intensional operators only and that they may not modify definite descriptions).

Indefinite descriptions followed by *na*-RRs in intensional contexts like the ones in (20)-(26) cannot be interpreted either referentially or specifically (in the sense defined in chapter 4):

- (20) O Janis epithimi na erotefti mia galida pou na ehi prasina matia
 The John desire-3s to fall in love a French that na have-3s green eyes
 John desires to fall in love with a French woman who has green eyes
- (21) I Maria den ehi vri ena arthro pou na sizita afto to thema
 The Mary not have found-3s an article that na discuss-3s this the issue
 Mary has not found a paper which discusses this issue

- (22) O Kostas tha proslavi mia gramatea pou na kseri grafomihani
 The Kostas will hire-3s a secretary that na know-3s typewriter
 Kostas will hire a secretary who knows how to type
- (23) Agorase/na agorasis ena podilato pou na ehi tahitites
 Buy/na buy-2s a bike that na have-3s gears
 Buy/you should buy a bike which has gears
- (24) Vrikes mia fusta pou na pigeni me tin blousa sou?
 Found-2s a skirt that na go-3s with the blouse yours
 Did you find a skirt which goes with your blouse
- (25) An dis ena forema pou na sou aresi, na to agorasis
 If see-2s a dress that na you like-3s, na it buy-2s
 If you see a dress which you like, you should buy it
- (26) Ean ihe mialo tha ihe pantrefti mia gineka pou na ine morfomeni
 If had-3s brain will had married-3s a woman that na is educated
 If he had any brains he would have married a woman who is educated⁵

That the noun phrases in (20)-(26) cannot be interpreted referentially or specifically can be shown by the unacceptability that results, if we try to continue the discourse with utterances which presuppose the referential or specific use of the noun phrase. For example, consider the unacceptability of the discourse in (27) ⁶ :

⁵I have (mostly) translated the non *na*- and the *na*-relatives with the simple indicative in English and so the semantic difference is lost in the English glosses. It might be helpful to think of the *na*-relatives as representing what is known as the narrow scope reading of the corresponding English utterances. Another way of translating at least some of these *na*-relatives is with the English "would". For example, for (20) "John desires to fall in love with a French woman who would have green eyes"

⁶Similar tests are used in Kleiber (1987:70). The symbol *? is used to mark a sequence of utterances as strongly unacceptable.

- (27) a. *?O Janis epithimi na erotefti mia galida pou na ehi prasina matia. Tin lene Iren
 The John desire-3s na fall in love a French that na has green eyes. Her call-3pl Iren
 *?John desires to fall in love with a French woman who would have green eyes. She is called Iren
- b. *?A: O Kostas tha proslavi mia gramatea pou na kseri grafomihani.
 B: Pia ine?
 A: The Kostas will hire a secretary that na know-3s typewriter
 B: Who is-3s?
 *?A: Kostas will hire a secretary who would know how to type.
 B: Who is she?

Notice that if you replace the *na*-relatives with non *na*-relatives in the examples above the referential interpretation is fine:

- (28) a. O Janis epithimi na erotefti mia galida pou ehi prasina matia. Tin lene Iren
 The John desire-3s na fall in love a French that have-3s green eyes. Her call-3pl Iren
 John desires to fall in love with a French woman who has green eyes. She is called Iren
- b. A: O Kostas tha proslavi mia gramatea pou kseri grafomihani.
 A: The Kostas will hire-3s a secretary that know-3s typewriter
 B: Pia?
 B: Who/which one?
 A: Kostas will hire a secretary who knows how to type.
 B: Which one?

Moreover, indefinite descriptions followed by *na*-RRs in the subject position may be interpreted attributively only:

- (29) Enas mathitis pou na apantise sosta den vrethike akoma
 a pupil who na answered-3s correctly not found-3s yet
 A pupil who answered correctly has not been found

It seems clear then that indefinite descriptions followed by *na*-RRs allow only the attributive interpretation. That is, the hearer is intended to build a representation on the basis of the concepts provided in the description and the relative only; the pragmatic inferences which result in the specific or the referential interpretation of indefinite descriptions are somehow prohibited.

For a definite or indefinite description to be used specifically or referentially there is one prerequisite: there must exist an individual/object that the speaker has in mind or intends the hearer to pick out. It seems that the use of a *na*-RR excludes this prerequisite. This does not mean that the use of a *na*-relative in, for example, (20) necessarily conveys that a French woman with green eyes does not exist but it does not exclude this possibility. Intuitively, this seems to be the source of the impossibility of a specific or referential use of the indefinite descriptions in (20)-(26).

According to the semantic analysis of *na*-clauses that I proposed in chapter 1, the presence of the modal particle *na* in the relatives in (20)-(26) indicates that the state of affairs described in the relative is true in some possible world. The question arises, however, whether a restrictive relative clause can be said to be describing a state of affairs? Doesn't it simply function as a modifier which ascribes a property to the head noun?⁷

According to Wilson and Sperber (1986, 1988a), the presence of a *wh*-word in interrogatives and exclamatives indicates that such utterances are interpretive representations of other thoughts. So, for example, an interrogative like (30)

- (30) What is on the table?

has the semantic representation in (31)

- (31) _____ is on the table

⁷For a recent syntactic analysis of relative clauses see Fabb (1990).

which interpretively represents a relevant thought (the thought expressed by (31) when it is completed). Extending this analysis to relative clauses, which are also characterised by the presence of a gap to be filled (the *wh*-word), we get the following result: the relative in (32)

(32) John desires to fall in love with a French woman who has green eyes

is an interpretation of the complete thought "A French woman has green eyes" which is itself a description of a state of affairs in the actual world⁸. In the same vein, the *na*-RR in, for example, (20) is an interpretive representation of the thought "a French woman has green eyes" which is a description of a state of affairs in a possible world, as the semantics of *na*-clauses dictates.

Given all this, the unavailability of the specific and referential use of the noun phrases followed by *na*-RRs seems to follow from the semantics of *na* and pragmatic considerations. In (20) the proposition "a French woman has green eyes" is entertained as a description of a state of affairs in a possible world. It follows that this proposition may or may not be a true description of the actual world (the actual world being one of the possible worlds). Now, if this proposition is entertained as a description of a state of affairs in a possible world, then nothing follows as to whether this proposition is a true description of the actual world and therefore nothing follows about whether a French woman with green eyes exists in the actual world. Given the possibility that such a woman may not exist, it cannot be the case that the speaker has in mind an individuating representation of such a person, and so the specific and the referential uses of the noun phrase are clearly excluded⁹. By contrast definite and indefinite descriptions followed by non *na*-RRs allow (given an appropriate context and considerations of relevance) specific and referential readings, as we have seen in the previous sections,

⁸I am grateful to Deirdre Wilson for suggesting to me this analysis of relatives.

⁹An explanation similar to this is given in Kleiber (1987:71-73) for subjunctive relatives in French, which also impose the attributive (or, according to Kleiber, the "nonspecific") reading. Kleiber claims that the subjunctive is the marker of nonspecific hypothetical existence. Because of this semantics, the sub-class defined by the noun phrase followed by the subjunctive relative may be empty, which excludes the specific and the referential interpretation.

because the indicative in the relative typically indicates that the proposition expressed is entertained as a description of a state of affairs in the actual world.

Two further considerations confirm the claim that it is the semantics of *na*-clauses which disallows the referential and the specific interpretation in the utterances above. First, *na*-RRs may occur only within the scope of an intensional expression. The sentences in (33) are ungrammatical because of the clash between the extensionality of the main clause and the semantics of the *na*-relative, whereas the corresponding sentences in (34) with non *na*-RRs are fine:

(33) a. *O Janis fita se ena panepistimio pou na ine poli gnosto
The John study-3s at a university that na is very well-known
John is studying at a university which is very well-known

b. *To koritsi pou na kathete dipla mou ine poli omorfo
the girl that na sit-3s next me-gen is very beautiful
The girl who's sitting next to me is very beautiful

(34) a. O Janis fita se ena panepistimio pou ine poli gnosto
The John study-3s at a university that is very well-known
John is studying at a university which is very well-known

b. To koritsi pou kathete dipla mou ine poli omorfo
the girl tha sit-3s next me-gen is very beautiful
The girl who is sitting next to me is very beautiful

So, a *na*-RR cannot modify a noun phrase which clearly refers to an individual or object in this world.¹⁰

¹⁰Apparent counterexamples to this claim may be utterances like (i):

- (i) Agorase epitelous i Maria ena palto pou na tis pigeni
Bought eventually the Maria a coat that na her suits
Mary eventually bought a coat which suits her

(i) clearly entails that there is a coat which suits Mary (in fact she bought it). Notice, however, that the word *epitelous* "eventually" is crucial for the acceptability of (i); (ii) below is definitely ungrammatical:

Second, if Kleiber and Martin (1977) are right in arguing that a quantifier like *chaque* carries a positive existential presupposition, and if their arguments carry over to the Greek equivalent *kathe*, then *kathe* should be incompatible with a *na*-RR in the same way that in French *chaque* is incompatible with a relative in the subjunctive as shown in (35) and (36):

(35) *Je désire visiter chaque maison qui ait des volets verts

(36) Je désire visiter chaque maison qui a des volets verts
(Kleiber 1987:73)

This is indeed the case as the following examples show:

(37) *O Janis theli na episkefti kathe spiti pou na ehi anakenisthi
The John want-3s na visit-3s-PF every house that na has been renovated-3s
*?John wants to visit every house which would have been renovated

(38) *O Janis den ehi episkefti kathe spiti pou na ehi anakenisthi
The John not have visited-3s every house that na have-3s been renovated
*?John has not visited every house which would have been renovated

(39) *Episkeftike o Janis kathe spiti pou na ehi anakenisthi?
Visited-3s the John every house that na has been renovated-3s
*?Did John visit every house which would have been renovated?

Compare these examples with the perfectly acceptable (40)-(42), where a non *na*-RR is used:

(ii) *Agorase i Maria ena palto pou na tis pigeni
bought-3s the Maria a coat that na her suit-3s
Mary bought a coat which suits her

This is because the word *epitelous* in (i) suggests that Mary had been looking for such a coat, thus creating an intensional context.

- (40) O Janis theli na episkefti kathe spiti pou ehi anakenisthi
 The John want-3s na visit-3s-PF every house that has been renovated
 John wants to visit every house which has been renovated
- (41) O Janis den ehi episkefti kathe spiti pou ehi anakenisthi
 The John not has-3s visited every house that has been renovated
 John has not visited every house which has been renovated
- (42) Episkeftike o Janis kathe spiti pou ehi anakenisthi?
 Visited-3s the John every house that has been renovated
 Did John visit every house which has been renovated?

Before concluding this section, it is interesting to consider the conditions which determine whether a speaker will use a *na*- or a non *na*-RR when she intends the indefinite description to be interpreted attributively. Let us compare (43) and (44):

- (43) I Maria theli na diavasi ena vivlio pou eksigi tis diafores metaksi tis Agglikis ke tis Ellinikis koulouras
 The Mary want-3s na read-3s-PF a book-acc that explain-3s-PF the differences between the English-gen and the Greek-gen culture-gen
 Mary wants to read a book which explains the differences between English and Greek culture
- (44) I Maria theli na diavasi ena vivlio pou na eksigi tis diafores metaksi tis Agglikis ke tis Ellinikis koulouras
 The Mary want-3s na read-3s-PF a book-acc that na explain-3s-IPF the differences between the English-gen and the Greek-gen culture
 Mary wants to read a book which would explain the differences between English and Greek culture

I have shown that the noun phrase *ena vivlio pou eksigi tis diafores metaksi tis Agglikis ke tis Ellinikis koulouras* "a book which explains the differences between English and Greek culture" in (43) may be interpreted either referentially

or attributively, depending on the context and considerations of optimal relevance. On the other hand, I have argued that the noun phrase *ena vivlio pou na eksigi tis diafores metaksi tis Agglikis ke tis Ellinikis koulouras* "a book which would explain the differences between English and Greek culture" in (44), which is linguistically more complex, may only be interpreted attributively as a result of the semantics of the *na*-RR. Imagine now a context where the speaker intends the NP "a book" to be interpreted attributively but where the referential interpretation is more easily accessible. For example, John is showing Peter a few books that he has just bought and one of them is on the differences between Greek and English culture. Suppose that Peter wants to say that his English girlfriend Mary wants to read such a book. Suppose further that Peter is well-known for wanting to borrow things from other people all the time. In this context, if Peter utters (43) pointing to John's book, John is likely to interpret the NP referentially. This interpretation would be very easily accessible given that there is an immediately accessible suitable referent, and it would, given the rest of the context, yield an adequate range of effects: for example, Peter may be implicating that he would like to borrow John's new book. To exclude this interpretation, Peter will choose to utter (44). So, depending on the accessibility of contexts, the linguistically costlier *na*-relative may end up saving the hearer some processing effort by making the intended interpretation explicit.¹¹

To sum up, definite and indefinite descriptions followed by non *na*-RRs may be interpreted either referentially or attributively depending on considerations of context and optimal relevance. Indefinite descriptions followed by *na*-RRs, on the other hand, may be interpreted attributively only, as a result of the semantics of *na*.

¹¹The same considerations about the accessibility of available contexts play a role in the interpretation of utterances like (i) and (ii):

- (i) You can have rice or vegetables
- (ii) You can have rice and/or vegetables

The disjunction in (i) may be interpreted exclusively or inclusively. By contrast (ii), which is linguistically more complex, allows the inclusive interpretation only. Now suppose you are convinced that I am stingy. Given this you are likely to interpret (i) exclusively. Now suppose further that I have set out to prove to you that I am not stingy. In this context I will probably choose the linguistically more complex (ii), which has the advantage of making the intended, i.e. the inclusive, interpretation explicit.

This does not provide any support for the view that definite and indefinite descriptions are ambiguous between an attributive and a referential sense. We simply have here a case where an interpretation which is usually contextually determined (the attributive interpretation) is effectively imposed by the semantics of the rest of the sentence.

5.3. The wide vs narrow scope distinction

5.3.1. Donnellan's distinction and the wide-narrow scope contrast

Veloudis (1985) conflates Donnellan's referential-attributive distinction with what he calls the "specific-nonspecific" contrast. His analysis at this point is based on Farkas (1985) who takes the specific-nonspecific distinction to be a matter of scope and argues that the referential-attributive contrast is a subcase of the specific-nonspecific distinction.

According to Farkas (1985), the specific-nonspecific ambiguity is the one characteristically found in sentences of the form "every sailor loves a girl" and has to do with considerations of scope (whether "a girl" takes wide or narrow scope with respect to the universal quantifier). Now, an utterance like

(45) Mary wants to go to an Ivy League university

has, according to Farkas, two interpretations. It may mean that there is a specific Ivy League university to which Mary wants to go or it may mean that Mary wants to go to some Ivy League university or other. In the first interpretation the indefinite description takes wide scope with respect to "want", in which case it is specific. In the second interpretation the indefinite description takes narrow scope, i.e. falls within the scope of "want", in which case it is nonspecific. For Farkas, specific NPs can only be referential and nonspecific NPs can only be attributive (see also Heringer 1969, Hall-Partee 1972, Cole 1975 and Rivero 1975). It follows, according to Farkas, that with regard to examples like (45) the specific-nonspecific and the referential-attributive distinctions coincide and are adequately represented in terms of scope.

I have argued in chapter 4 that the referential-attributive distinction cannot be defined in terms of scope variation. It has repeatedly been pointed out in the literature that the claim that wide scope NPs can only be referential does not stand up to close scrutiny (loup 1977, Kripke 1977, King 1988, Neale 1990, Ludlow and Neale 1991). On the wide scope reading the utterance in (45) admits of two interpretations. It may mean that there is a particular university, say X, to which Mary wants to go or it may mean that there is some Ivy League university or other, to which Mary wants to go. So, the wide scope (or specific) reading of the utterance in (45) does not inevitably lead to the referential interpretation of the NP. In other words, the referential use cannot be defined in terms of the wide scope reading and the attributive use cannot be defined in terms of the narrow scope reading.

Although the wide-narrow scope contrast does not represent the referential-attributive distinction, it may be a way of representing two pairs of interpretations of utterances like (45).¹²

First, utterances like (46),

(46) Fred wants to meet a Spanish girl who likes cycling

are assumed to be ambiguous between a reading on which you can infer that there is a Spanish girl who likes cycling and a reading on which this inference would not go through. The first reading is usually represented by a logical form where the indefinite description followed by the relative takes wide scope over "want"; the second reading is represented by letting the indefinite and the relative fall under the scope of "want". In this case the wide scope represents the reading of (46) on which existential generalisation can go through, whereas the narrow scope represents the reading on which existential generalisation fails.

Second, utterances like (47)

¹²The way of understanding the wide-narrow contrast that I am about to present relates to the distinction that philosophers draw between transparent and opaque contexts (Quine 1969, Fodor 1979). The term opaque context is used for those linguistic contexts (sentence forms) in which two inference rules, existential generalisation and substitutivity of identicals, do not apply. Here, these two rules are going to be discussed separately.

(47) John wants to follow a course which is fun

are standardly taken to be ambiguous between the transparent and the opaque interpretations. On the transparent interpretation, the speaker (but not necessarily John) thinks of the course that John wants to follow that it is fun. On the opaque interpretation it is John (and not the speaker) who thinks of the course he wants to follow that it is fun. (For this construal of the transparent-opaque distinction see Bach 1987: 194-218, especially 200-201; Récanati 1993: 386-393, especially 389). As we will see on the opaque interpretation of utterances like (47) the law of substitution of identicals *salva veritate* does not apply.

In the remainder of this chapter I want to consider whether these two distinctions, that may be represented in terms of scope variation, are in any sense captured by the choice between a non *na*- and a *na*-RR.

5.3.2. Existential generalisation and the choice of mood

Farkas (1985) argues that in Romanian the mood of a relative clause depends on whether the NP in which the relative occurs is within the scope of an intensional operator. According to her, if an NP has narrow scope then it may take a subjunctive relative. So, for example in (48) you can have a subjunctive relative because the NP falls under the scope of the world-creating verb. On the other hand, an utterance like (49) with an indicative relative, is ambiguous depending on whether the NP takes wide or narrow scope with respect to "want".

(48) Ion vrea sa prinda un peste care sa aiba 5 kg
Ion wants to catch a fish which has(SUBJ) 5 kg
Ion wants to catch a fish which weighs 5 kg

(49) Ion vrea sa prinda un peste care are 5 kg
Ion wants to catch a fish which has(IND) 5 kg
Ion wants to catch a fish which weighs 5 kg

Veloudis (1985) makes the same claims about MG. In (50), where the NP falls within the scope of "want", a *na*-RR is used. (51), on the other hand, is ambiguous: the indefinite description and the relative may have wide or narrow scope with respect to "want":

(50) O Janis theli na piasi ena psari pou na zigizi 5 kila
 the John want-3s na catch-3s-PF a fish that na weigh-3s 5 kilos
 John wants to catch a fish which weighs 5 kilos

(51) O Janis theli na piasi ena psari pou zigizi 5 kila
 The John want-3s na catch-3s-PF a fish that weigh-3s 5 kilos
 John wants to catch a fish which weighs 5 kilos

If we take scope permutation as a means of representing the applicability of the rule of existential generalisation, then we could claim that in Greek this is to some extent reflected by the choice between a *na*- and a non *na*-RR in the linguistic environment of intensional expressions. As I argued in section 5.2.3, sentences like the ones in (20)-(26), where the indefinite description is followed by a *na*-RR allow the narrow scope reading only, which means that existential generalisation is never valid in such sentences. The fact that existential generalisation is not possible in these examples simply follows from the semantics of *na*-clauses. The *na*-relatives encode that the proposition expressed is entertained as a description of a state of affairs in a possible world. From this you cannot infer that something satisfying the description given in the NP and the relative exists in the actual world. Nor can you infer that something satisfying the description does not exist in the actual world. Otherwise, all the utterances in (20) to (26) would be somewhat contradictory. The speaker using the *na*-relative avoids making any claims with regard to whether something satisfying the description exists or not. So, the *na*-clause imposes the narrow scope interpretation of these utterances and existential generalisation is not valid.

Let us now consider whether existential generalisation may apply when we have indefinite descriptions followed by non *na*-RRs in the context of the intensional expressions:

- (52) O Janis epithimi na erotefti mia galida pou ehi prasina matia
 The John desire-3s na fall in love a French that have-3s green eyes
 John desires to fall in love with a French woman who has green eyes
- (53) Agorase/na agorasis ena podilato pou ehi tahitites
 Buy/na buy-2s a bike that have-3s gears
 Buy/you should buy a bike which has gears
- (54) O Kostas tha proslavi mia gramatea pou kseri grafomihani
 The Kostas will hire-3s a secretary that know-3s typewriter
 Kostas will hire a secretary who knows how to type
- (55) An dis ena forema pou sou aresi, na to agorasis
 If see-2s a dress that you like-3s, na it buy-2s
 If you see a dress which you like, you should buy it
- (56) I Maria den ehi vri ena arthro pou sizita afto to thema
 The Mary not have-3s found an article that discuss-3s this the issue
 Mary has not found a paper which discusses this issue
- (57) Vrikes mia doulia pou se ikanopii?
 found-2s a job that you satisfy-3s
 Have you found a job that satisfies you?

According to Veloudis (1985), (52)-(57) allow both a wide and a narrow scope reading. To the extent that scope permutation represents the possibility of inferring the existential implication, this is compatible with the semantics of non *na*-RRs. As I argued in chapter 1, a non *na*-clause encodes the information that the proposition expressed is entertained as a description of a state of affairs in the base world. In most cases the base world will be pragmatically set to be the actual world. Given this, the implication of existence will be built into the proposition expressed (as explained in chapter 4) and existential generalisation is possible. So, for example, (52) has a reading on which the NP takes wide scope and which could be roughly paraphrased as "there is a French woman who has green eyes and John wants

to marry her". In this case, John has a desire which is directed towards an individual in the actual world. Alternatively, the base world indicated by the non *na*-relative may be inferred to be the world defined by John's desire, in which case the proposition expressed in the relative describes part of what John wants. So, (52) has a reading on which the NP and the relative take narrow scope with respect to "want" and could be roughly paraphrased as "John wants that he fall in love with a French woman with green eyes". In this case existential generalisation is not warranted. Similar considerations hold for (53). If the base world indicated by the indicative relative is taken to be the actual world, then existential generalisation will go through; if, on the other hand, the base world is understood to be the potential and desirable world described by the imperative/*na*-clause, then existential generalisation cannot apply.

To the extent that the examples in (54)-(57) also have two interpretations (one on which existential generalisation goes through and another on which it does not), they should be accounted for pragmatically as well. A full discussion of these examples will have to be based on the semantics of the future, conditional clauses, negation and interrogatives, which does not (necessarily) involve possible worlds.¹³ For example, natural language negation is usually taken to be semantically equivalent to the logical operator - (Grice 1975/89, Kempson 1986, Carston 1994). Assuming this semantics for the negation in (56), we cannot account for the perfectly acceptable (58) by claiming that the base world in the relative is not actual (there is nothing in the sentence that could cause the shift from the default interpretation of the indicative to some other interpretation)¹⁴:

¹³For a semantic analysis of future which does not involve the concept of possible worlds see Huntley (1980, 1984); for an analysis of conditionals which does not involve possible worlds see Smith and Smith (1988). A semantic analysis of interrogatives which does not hinge on the idea of possible worlds has been proposed by Wilson and Sperber (1988a) and was outlined in this thesis in chapter 3.

¹⁴Some arguments supporting the claim made here that (60) is not contradictory are proposed in Carston (1994).

(58) I Maria den ehi vri ena arthro pou sizita afto to thema giati tetio arthro den ehi akoma grafti

The Mary not have-3s found an article that discuss-3s this the issue because such article not have-3s yet written

Mary has not found a paper which discusses this issue because such a paper hasn't been written yet

The interpretation of such an utterance depends on the way the scope or focus of negation is pragmatically fixed (Burton-Roberts 1989, Carston 1994). I hope to consider the interpretation of utterances like those in (52)-(57) in full detail in future work.

Now, when will the speaker utter (52) and when will she utter (20) (with the *na*-RR), if she intends to communicate that no existential generalisation is warranted? Since (52) allows both interpretations, the speaker will choose it, in order to communicate that existential generalisation does not go through, only if she is certain that the hearer is capable of recovering the intended interpretation. If she has doubts about whether the hearer can work out the intended interpretation, she will utter (20) which allows only the narrow scope reading.

Finally, let's consider (59)-(61), where we have definite descriptions followed by non *na*-relatives:

(59) O Janis epithimi na erotefti ti galida pou ehi prasina matia

The John desire-3s na fall in love the French that have-3s green eyes

John desires to fall in love with the French woman who has green eyes

(60) I Maria den ehi vri to arthro pou sizita afto to thema

The Mary not have-3s found the article that discuss-3s this the issue

Mary has not found the paper which discusses this issue

(61) Na shediasis to sakaki pou tha katapliksi ton diasimotero shediasti

na design-2s the jacket that will surprise-3s the most famous fashion designer

Design the jacket which will leave the most famous fashion designer speechless

Veloudis claims that definite descriptions followed by non *na*-relatives in the linguistic context of intensional operators can be interpreted specifically only, i.e. they must have wide scope. On the view discussed here, wide scope means that existential generalisation goes through. This initially seems to be right for (59) and (60) but not for (61), where it is clear that existential generalisation does not apply (the jacket in question does not exist yet). Notice, moreover, that the following examples are not contradictory:

- (62) O Janis epithimi na erotefti ti galida pou ehi deka ipikootites alla den iparhi kamia galida me deka ipikootites

The John desire-3s na fall in love-3s-PF the French that have-3s ten nationalities but not exist-3s no French with ten nationalities

John desires to marry the French woman who has ten nationalities but there is no French woman with ten nationalities

- (63) I Maria den ehi vri to arthro pou sizita afto to thema giati tetio arthro den ehi akoma grafti

The Mary not have-3s found the article that discuss-3s this the issue because sich article not have-3s yet written

Maria has not found the paper which discusses this issue because such a paper has not yet been written

Such examples suggest that (59) and (60) allow in principle both the wide and the narrow scope readings, i.e. both a reading on which the existential generalisation goes through and a reading on which it doesn't. Pragmatic considerations will help the hearer decide which of the two interpretations is the intended one in a particular context.

To conclude, I have shown in this section that sentences with definite or indefinite descriptions followed by *na*-RRs in the context of intensional expressions only allow the interpretation on which existential generalisation does not apply (narrow scope). By contrast, utterances with definite or indefinite descriptions followed by non *na*-RRs allow both the interpretation on which existential generalisation goes through and the interpretation on which it does not. This indeterminacy is resolved on the basis of considerations of context and optimal

relevance on any given occasion. So, the wide-narrow scope distinction (or rather this way of understanding it) is captured by the contrast between non *na*- and *na*-relatives, in that *na*-RRs force the narrow scope (nonexistential) interpretation whereas non *na*-RRs allow both interpretations.

5.3.3. The responsibility for the description and the choice of mood

Veloudis (1985:133) takes the transparent-opaque distinction, as construed in section 5.3.1., to be semantic and he claims that an indefinite description followed by a *na*-relative in the context of an intensional operator can be understood opaquely only. So, for example, (64) below can only mean that it is John, the grammatical subject, who regards the solution as one with many advantages (opaque interpretation):

- (64) O Janis theli na protini mia lisi pou na ehi polla pleonektimata
 The John want-3s na propose a solution that na have-3s many advantages
 John wants to propose a solution which has a lot of advantages

(Veloudis 1985: 134)

(65), on the other hand, where the indefinite description is modified by a non *na*-relative may mean either that it is John (opaque interpretation), or that it is the speaker (transparent interpretation), who regards the solution as very advantageous:

- (65) O Janis theli na protini mia lisi pou ehi polla pleonektimata
 The John want-3s na propose a solution that have-3s many advantages
 John wants to propose a solution which has a lot of advantages

(Veloudis 1985: 134)

In this section I want to show that, contrary to what Veloudis claims, the choice of a *na*-relative does not inevitably lead to the opaque interpretation. Furthermore, I

want to argue that the transparent-opaque distinction is not a matter of linguistic semantics, and to suggest a pragmatic account within the framework of relevance theory.

The question of whether the responsibility for the description lies with the speaker or the grammatical subject leads in certain contexts, in particular in quotation or indirect speech contexts and in the context of propositional attitude verbs, to the non applicability of the inferential law of substitutivity of identicals. The problem is usually presented in the following way. Whereas an argument like the one in (66) is valid,

- (66) a. Bill hit the busdriver
b. The busdriver is the man in the blue uniform

c. Bill hit the man in the blue uniform

the argument in (67) is valid only if Kate is aware of the proposition in (b):

- (67) a. Kate believes that the singer of "Sign of the Times" is blind
b. The singer of the "Sign of the Times" is Prince

c. Kate believes that Prince is blind

In other words (67a) is ambiguous between a reading on which Kate has a belief about a particular individual (Prince), on which the inference in (67) is valid, and a reading on which Kate holds the belief that the singer of "Sign of the Times" is blind, on which the inference in (67) is not valid. The contexts in which the rule of substitutivity of identicals *salva veritate* is not valid are called opaque contexts and the phenomenon illustrated by (67) is often called referential opacity (Cole 1975, 1978, Heringer 1969, Fodor 1979, McCawley 1970, 1973, Hasegawa 1972). Couching this in psychologically plausible terms we might say that in the first case, the transparent interpretation, Kate has two ways of thinking about Prince: As "Prince" and as "the singer of Sign of the Times", so (67c) follows; in the second case Kate thinks of the singer of the Sign of the Times only under this description; it is the speaker who thinks of him also as "Prince"; so, (67c) does not follow.

The question regarding the status of the transparent - opaque distinction, whether it is syntactic/semantic or pragmatic, has been widely discussed in the literature (for an overview see Kleiber 1979, Richard 1990, Récanati 1993). I said in section 5.3.1. that scope variation may be one way of representing this distinction. However, regarding this distinction as an ambiguity in the logical structure of the sentence, i.e. as the result of scope permutation, does not seem right. As Bach (1987:207-8) argues, it does not follow from the fact that the alleged ambiguity can be represented in terms of scope that it actually is a scope ambiguity, i.e. that such utterances do have two different logical structures. According to Bach, this distinction must be syntactically grounded if it is to qualify as a semantic distinction rather than a case of pragmatic indeterminacy. However, no such evidence seems to be available. (67a) may have either a transparent or an opaque reading. The same holds, contrary to standard assumptions, of sentences of the type "believe of", as for example in (68), which are standardly taken to have the transparent reading only and thus to provide some support for the scope ambiguity position.

(68) Kate believes of the singer of "Sign of the Times" that he is blind

There is little doubt that (68) is more readily interpreted transparently, but this does not mean that the opaque interpretation is impossible. Let me reconstruct Bach's argument. Suppose that there is no such person as the singer of "Sign of the Times" but Kate believes that there is such a person and that he is blind. Then I can report Kate's beliefs in the following way: "Kate has this fantasy that the song "Sign of the Times" has already been sung by someone. Moreover, she believes of the singer of "Sign of the Times" that he is blind". In this context (68) is interpreted opaquely (it is Kate who is responsible for the description, not the speaker). So, since there are not two distinct syntactic structures corresponding to the two distinct interpretations, there is no syntactic evidence for the alleged ambiguity of sentences like (67a).

Moreover, Bach (1987:209-210) argues, even if we accept that such sentences have two logical forms and that narrow scope with respect to the propositional attitude verb corresponds to the opaque interpretation whereas wide scope corresponds to the transparent interpretation, the notion of scope could still

not *explain* this distinction. The idea would be that a sentence of the form "S believes that the F is G" has the following two logical forms, assuming standard Russellian formulation:

- (69) a. S believes that $(\exists x)(Fx \ \& \ \forall y(Fy \rightarrow y=x) \ \& \ Gx)$
b. $(\exists x)(Fx \ \& \ \forall y(Fy \rightarrow y=x) \ \& \ S \text{ believes that } Gx)$
(from Bach 1987:209)

Notice, however, that the issue of the origin of the description arises again with respect to the logical form in (69a). "Mere inspection does not tell us whether some coextensive 'f' can be substituted for 'F' in [(69a)]...Unless we assume that the context after 'believes that' in [(69a)] is opaque, we cannot exclude such substitution. Of course, we can exclude it by stipulation, since we already know that opacity prohibits substitution, but the point was to explain opacity in terms of scope." (Bach 1987:209). The same problem arises with respect to (69b), as Bach notes. (69b) says that there is something that S believes to be G. But, obviously, S thinks of that something in some particular way, which may be available to the speaker as well or not. It follows that the wide-narrow scope contrast does not correspond, and thus does not explain, the transparent-opaque distinction.

If the transparent-opaque distinction is not syntactic/semantic, then it might be that the opacity generating component of the meaning of such an utterance can be derived from conversational principles. Indeed many authors (Urmson 1968, Barwise and Perry 1983, Salmon 1986) have analyzed the opaque reading of such utterances as an implicature derivable through conversational maxims of the Gricean sort. For such authors, (70a&b):

- (70) a. John believes that Cicero is poor
b. John believes that Tully is poor

are truth-conditionally equivalent, they express the same proposition. The difference between them is that they implicate different things, namely that Cicero is thought of as Cicero in the first one whereas Cicero is thought of as Tully in the second one. It is the communication of these implicatures which makes the law of substitutivity of identicals apparently fail in these contexts. Strictly speaking,

however, the two utterances literally say the same thing and therefore in principle substitutivity of identicals is possible.

Récanati (1993: 326-347) offers a very detailed presentation of what he calls "The Implicature Theory", as well as very convincing arguments for dropping it. The main problem with the implicature theory is that it cannot explain our intuitions about the truth conditions of belief reports, i.e. that we normally understand (70a) and (70b) to be truth conditionally distinct. In other words, we tend to incorporate the "how Cicero is thought of" in the truth conditions of the utterance. Récanati rejects the implicature theory but does not opt for the syntactic/semantic ambiguity position. Instead, he proposes that it is the semantics of *that*-clauses that needs to be reconsidered. (See Récanati 1993: 348-367).

A full discussion of the semantics of the propositional attitude contexts falls beyond the scope of this dissertation. I want, however, to suggest a line of investigation by putting forward the idea that a psychologically plausible account of the transparent-opaque distinction should be based on the relevance theoretic distinction between description and interpretation. In particular, such an account would involve the notion of interpretive attributive use. As I explained in Chapter 3, a distinction is made within relevance theory between two ways in which a representation can be used. Any representation can be used to represent some state of affairs by virtue of its propositional form being true of that state of affairs, in which case it is said to be a description, or to be used descriptively. Alternatively, a thought or utterance (with some propositional form) may be used to represent another thought or utterance (with some propositional form) by virtue of a resemblance between the two propositional forms. In this case, the first thought/utterance is said to be an interpretation of the second one or to be used interpretively. One type of interpretive use is attributive use. An utterance is used attributively when the speaker attributes the proposition expressed to someone else. According to Sperber and Wilson, this is what happens typically in quotation contexts, indirect speech contexts and belief reports, which, note, happen to be the contexts where opacity typically arises. An attributively used utterance (or, more generally, representation) may achieve relevance by informing the hearer of the fact that someone has said something or thinks something. Or, an attributively used representation may achieve relevance by informing the hearer that the speaker has in mind what someone else has said or thinks and has a particular

attitude towards that. (For a more detailed presentation of these concepts and examples see Chapter 3 or Sperber and Wilson 1986: 224-231).

Let us start by taking an example in order to see how the transparent-opaque distinction arises in real life conversations. Suppose that Mary saw me the other day having lunch with my boyfriend. However, I didn't want to tell her that the man she saw was my boyfriend, so I introduced him to her as "the new head of the philosophy department", which he is not. Later I tell this story to my friend Lucy, and I utter (71):

(71) Mary believes that the new head of the philosophy department is cute

In this case the hearer has reason to infer that the definite description is used opaquely, i.e. it is ascribed to Mary. She will realise that the speaker does not intend to communicate that Mary thinks of the person who really is the new head of the philosophy department (maybe there is no such person) that he is cute. The speaker is attributing the definite description to Mary and dissociating herself from it. She is saying that Mary believes that the person she thinks of as the new head of the philosophy department is cute. So, the proposition expressed by (71) in this context is along the lines of (72):

(72) Mary Smith believes that the person she believes is the new head of the philosophy department is cute

The speaker may be implicating that Mary thought this man cute because she thought he has the prestigious position of head, or she may be implicating that Mary thought the speaker's boyfriend is cute and at the same time making fun of the fact that Mary thinks of him as the new head of the philosophy department, etc. In any case the description is simply mentioned by the speaker and attributed to Mary. So, the opaque interpretation arises when the precise form under which the subject holds a belief is part of what the speaker intends to communicate and is therefore pertinent to the way the utterance is interpreted.

Now suppose that Mary has already met the person who is in fact the new head of the philosophy department but she did not realise that the person she met was the new head of the philosophy department. She thinks of the man she met

as "the distinguished philosopher Prof. Wilter". Now suppose you and I know this and we also know that Prof. Wilter is the new head of the philosophy department. In this context if I utter (71) you will interpret it transparently, i.e. you will realise that the description "the new head of the philosophy department" is not part of Mary's belief, but rather my interpretation of Mary's belief. In this case it is the speaker who takes responsibility for the description rather than the holder of the belief. The description is not being used attributively as in the previous example. The proposition expressed by (71) in this context is something like (73):

(73) Mary Smith believes that the person I know to be the new head of the philosophy department is cute

So, on this account, the opaque interpretation will arise if the speaker intends to communicate that she is attributing the description to Mary, whereas the transparent interpretation will arise if the speaker takes responsibility for the description herself. In fact there are more than just these two possibilities. Notice first that in the case where the speaker intends to attribute the description to Mary, she may also express an attitude towards it: either that of dissociation, as in the example we considered, or that of endorsement, approval etc. On the other hand, in the case where the speaker takes responsibility for the description it may be manifest from the context and crucial for the interpretation of the utterance that Mary also holds this representation or that she doesn't. Moreover, the speaker may be attributing the description not to Mary but to someone else. So, suppose that we all know the new head of the philosophy department, in fact he's been with us for a while, so we never refer to him as "the new head" any more. The only exception is the secretary, Sue, an older woman who can't bring herself to acknowledge that the old head, for whom she worked all her life, is gone and someone else has taken his place. Uttering (71) in this context, I would be most likely understood to be attributing the definite description to Sue, thus indirectly comparing Sue's sore feelings with Mary's rather positive feeling about this man. In this case the proposition expressed by (71) would differ from (72) with respect to the person to whom the description is attributed.

There is no doubt that a lot more needs to be said here. For example, it may be reasonable to assume that in belief contexts the *that*-clause is an

interpretive representation (more or less faithful) of the subject's (Mary's in (71)) original belief, on either the transparent or the opaque interpretation. This complication does not arise for the intensional contexts in which *na*-RR occur, since there is no reason to suspect, as in the case of belief contexts, that they are inherently interpretive. Moreover, a full account of the transparent-opaque distinction should look at multiple embeddings like (74), as well as at examples like (75), where the potentially attributively used description is not in subject position.

(74) Tom thinks that Mary believes that the new head of the philosophy department is cute

(75) Mary believes that Ann is in love with the new head of the philosophy department.

Although this account is only very barely sketched here, it seems to have a lot in its favour: (a) it doesn't stipulate an ambiguity between transparent and opaque readings for which there is no independent evidence; (b) it makes use of the independently motivated relevance-theoretic notion of (interpretive) attributive use; so there is no need to expand the already existing pragmatic machinery (c) it is more adequate than the implicature account because it makes the right predictions about the truth conditions of utterances like (70a) and (70b): (70a) is true iff John holds as true the representation "Cicero is poor", whereas (70b) is true iff John holds as true the representation "Tully is poor". The fact that the law of substitutivity of identicals does not apply is not surprising on this view, since the two representations, "Cicero is poor" and "Tully is poor", are not identical (although their extensions may be).

I will now return to the Greek data and Veloudis's claims. Let me first discuss non *na*-RRs. Consider (64), repeated below:

(64) O Janis theli na protini mia lisi pou ehi polla pleonektimata
The John wants to propose a solution that has many advantages
John wants to propose a solution which has a lot of advantages

As Veloudis claims, (64) has two interpretations, as we can see from the paraphrases in (76):

- (76) a. O Janis theli na protini mia lisi pou ehi, kata ti gnomi tou, polla pleonektimata
the Johns want-3s na propose-3s-IPF a solution that have-3s, according to opinion his, many advantages
John wants to propose a solution which, in his opinion, has many advantages
- b. O Janis theli na protini mia lisi pou ehi, kata ti gnomi mou, polla pleonektimata
the John want-3s na propose-3s-IPF a solution that have-3s, according the opinion mine, many advantages
John wants to propose a solution which, in my opinion, has many advantages

When (64) is interpreted as in (76a), the noun phrase *mia lisi pou ehi polla pleonektimata* "a solution which has many advantages" is used attributively (opaquely). The speaker does not take responsibility for the description; she attributes it to John and perhaps expresses an attitude towards it. The speaker may be endorsing John's view, or dissociating from John's position in a neutral way (John and the speaker have different opinions but each respects the other's views), or she may be dissociating from the contents of the description and ridiculing John for ascribing to it, in which case the speaker is being ironical, etc. When (64) is interpreted as in (76b), the noun phrase is interpreted descriptively: the speaker takes responsibility for it, in the same way that she takes responsibility for describing the world which is desirable to John. Additional assumptions, such as that John also considers this solution advantageous or that in fact John does not consider this solution advantageous, may be manifest in the context and may play a role in the interpretation of the utterance. Alternatively, in a suitable context, the noun phrase in (64) may originate neither from the speaker nor from the grammatical subject, but rather be attributed to some third party. The same

interpretive possibilities exist for definite descriptions followed by non *na*-RRs in intensional contexts and they would be accounted for in a similar way.

Let's now return to *na*-RRs and Veloudis's claim that the description in the relative may be associated with the grammatical subject only. The first thing to note is that most of the contexts in which *na*-relatives appear do not belong to the category of contexts in which opacity typically arises. Consider the following examples:

- (77) Fere mou/*na* mou feris ena potiri pou *na* min ine spasmeno
Bring-2s-imp/*na* bring-2s-PF me a glass that *na* not is broken
Bring/You should bring me a glass which is not broken
- (78) Vrike o Petros ena koritsi pou *na* ton anehete?
Found-3s the Peter a girl that *na* him tolerate-3s
Did Peter find a girl who tolerates him?
- (79) O Petros tha pantrefti mia kopella pou *na* ehi polla lefta
The Peter will marry-3s a girl that *na* have-3s a lot of money
Peter will marry a girl who has a lot of money
- (80) O Petros den ehi diavasi ena vivlio pou *na* min to engrini i Maria
The Peter not has read a books that *na* not it approves of the Mary
Peter has not read a book which Mary would not approve of
- (81) Ean vri ena sakaki pou *na* teriazi me to panteloni tou, elpizo *na* to agorasi
If finds-3s a jacket that *na* go-3s with the trousers his, hope-1s *na* it buy-3s
If he finds a jacket which goes well with his trousers, I hope he will buy it

Imperatives, interrogatives, utterances in the future, negative utterances and conditionals are not among the contexts the interpretation of which typically gives rise to the transparent-opaque distinction, like for example belief reports. So, there is nothing in these utterances to suggest a priori that the description in the relative is to be interpreted *de dicto*.

Moreover, the noun phrases in (77)-(81) do not have to be interpreted as originating from the grammatical subject. As a matter of fact, it is very difficult to find a context in which the noun phrase in (77) *ena potiri pou na min ine spasmeno* "a glass which is not broken" may be interpreted as originating from the grammatical subject ("you") of the utterance. The noun phrases in (78)-(81) may be interpreted either as originating from the grammatical subject or as originating from the speaker depending on considerations of optimal relevance and context. The noun phrase in (78) *ena koritsi pou na ton anehete* "a girl who would tolerate him" is most likely to be associated with the speaker, on the standard assumption that Peter does not think of himself as someone that other people have to "tolerate". In a different context it could, of course, be interpreted as attributed to Peter. Suppose, for example, that Peter always thinks and speaks in the most negative way about himself. Suppose further that often in the past I have expressed my disapproval of Peter's tendency to put himself down; I, actually, think that he is quite a nice person. In such a context, I may utter (78) echoing Peter's views of himself. In particular, I would be attributing the noun phrase to Peter and I would be dissociating myself from it. Consider now (79). On the basis of Peter's very mercenary character, I may utter (79) taking full responsibility for the description "a girl who would have a lot of money". Now consider a different context. Suppose, Peter always claims that he will solve his financial problems by marrying a rich girl. However, on the basis of his otherwise very honest and sentimental character I believe that Peter will eventually marry for love. In the middle of a discussion about our future plans, I may jocularly utter (79) attributing the noun phrase to Peter and dissociating myself from it. Similar contexts can easily be constructed for the rest of the examples, so that the relevant noun phrases may be interpreted as originating either from the grammatical subject or the speaker.

The point I am trying to make about the *na*-relatives in (78)-(81) is that they do not have to be interpreted opaquely, although, of course, they might given the appropriate context. Remember that I argued in chapter 3 that some utterances have to be interpreted as being used interpretively because they contain some linguistic device which encodes interpretive use (for example, the particle *ré* in Sissala). I then argued that *na* is not an interpretive use marker. The fact that the

na-relatives in utterances like those in (77)-(81) do not have to be interpreted opaquely provides further evidence for that claim.¹⁵

Now consider the interpretation of *na*-RRs in the context of propositional attitude verbs, a context in which opacity does typically arise. As the following examples show, the description in the relative does not have to originate from the grammatical subject:

- (82) a. O Kostas hriazete na vri mia gineka pou na tou pleni ke na tou sideroni
 The Kostas need-3s na find-3s a woman that na his wash-3s and na his iron-3s
 alla den to paradehete
 but not it accept-3s
 Kostas needs to find a woman who would do the wash and the ironing for him but he won't admit it
- b. O Petros psahni na vri ena koritsi pou na tou thimizi tin Anna an
 The Peter look-3s for na find-3s a girl that na his remind-3s the Anna
 an ke o idios to arnite
 if and the himself it deny-3s
 Peter is looking for a girl who would remind him of Anna although he denies it

¹⁵Notice here that the descriptions in the examples (77)-(81) may be associated with the speaker, i.e. they may be interpreted transparently, although existential generalisation is not warranted as explained earlier. The transparent interpretation is usually understood to arise only if there is an object about which the subject is said to be thinking (for example Récanati 1993: 389, 391). However, the construal of the transparent-opaque distinction in terms of "who is responsible for the description" allows it to be explained as an instance of a broader phenomenon which is not confined to referring terms, i.e. terms which presuppose existence.

c. Afto pou nomizo ego oti theli na agorasi o Kostas ine ena spiti pou na ine
 this that think-1s I that want-3s na buy-3s the Kostas is a house that na is
 pamthino ki as diafoni ekinos
 extremely cheap and let disagree-3s he
 What I think that Kostas wants is a house that would be extremely cheap,
 and let him disagree (even though he disagrees)

The fact that the utterances in (82a-c) are perfectly acceptable although the grammatical subject clearly rejects the description in the *na*-relative shows that, contrary to what Veloudis claims, such utterances do have an interpretation where the content of the *na*-relative originates from the speaker. Indefinite descriptions followed by *na*-RRs in the context of propositional attitude verbs like "want" will be interpreted either as exercised by the speaker or as ascribed to the subject depending on the context and considerations of relevance.

A final consideration is this. If the *na*-structure was in any sense responsible for isolating the opaque interpretation, then we would expect *na*-relatives to co-occur easily with verbs like 'claim', 'think' and 'believe'. It is, after all, such verbs which are typically associated with the transparent-opaque distinction. However, this turns out to be impossible:

- (83) a. *I Maria ishirizete oti o Kostas forai ena panteloni pou na ine metaksoto
 the Maria claim-3s that the Kostas wear-3s a trouser that na is made of silk
 Mary claims that Kostas is wearing a pair of trousers which is made of silk
- b. *I Maria nomizi/pistevei oti i fetini ipospifii ine anthropi pou na ehoun
 oreksi gia doulia
 the Mary think/believe-3s that the this year's candidates are people that na
 have-3s appetite for work
 Mary thinks/believes that this year's candidates are people who are keen
 to work

So, the transparent-opaque distinction is not grammaticalised in MG by the choice between a non *na*- and a *na*-relative in the context of intensional expressions.

However, in the absence of specific contextual information, when the description and the relative fall in the scope of a propositional attitude verb, as in (84),

- (84) O Kostas theli na agorasi ena spiti pou na ine evrihoro
The Kostas wants na buy-3s a house that na is spacious
Kostas wants to buy a house which would be spacious

they tend to be understood opaquely, i.e. as being attributed to the subject (the speaker may agree or disagree). This is because inference of the proposition "there exists a house which is spacious" is not warranted here. The absence of this inference not only excludes the referential interpretation, as I explained in 5.2.3, but also it makes the opaque interpretation more prominent by suggesting that a house which is spacious exists in a world which is potential and desirable from Kostas's point of view and therefore is part of what Kostas desires. However, as I have shown, this interpretation, although easily constructable, is not in any way encoded or forced, and may be overturned by appropriate contextual information.

5.4. Summary

In this chapter I have discussed the relevance of certain semantic and pragmatic distinctions to the interpretation of *na*-restrictive relatives in Modern Greek. I argued in the last chapter that the referential-attributive distinction is pragmatic. In this chapter I have shown that this distinction is captured in MG to a limited extent by the choice between a non *na*- and a *na*-relative, in that indefinite descriptions followed by *na*-relatives may be interpreted attributively only, whereas definite and indefinite descriptions followed by non *na*-relatives may be interpreted either referentially or attributively, depending on the context and considerations of relevance. I argued that the isolation of the attributive interpretation was a direct consequence of the semantics of *na* and therefore did not support the view that definite and indefinite descriptions are ambiguous between an attributive and a referential sense. In the second part of this chapter I discussed two other distinctions which have often been represented and talked about in the literature in terms of scope variation. The first distinction had to do with the applicability of the

inferential rule of existential generalisation. I argued that the fact that existential generalisation cannot apply to sentences with noun phrases followed by *na*-RRs falls out from the semantics of *na*-clauses. As for utterances with noun phrases followed by non *na*-RRs, I argued that they may have both interpretations, i.e. one on which existential generalisation is allowed and another one on which it is not. I suggested that this should be seen as another case of semantic vagueness or indeterminacy which is resolved pragmatically. Which interpretation is the intended one in a particular context depends on considerations of optimal relevance. Finally, I discussed the transparent-opaque distinction. I suggested that this distinction is psychologically plausible and interesting for a theory of utterance interpretation to the extent that it relates to the issue of who takes responsibility for a conceptual representation. I have argued that this too is not a matter of linguistic semantics but rather falls within the domain of pragmatics, and proposed that it could be accounted for within relevance theory in terms of interpretive attributive use. With respect to the Greek data, I showed that, contrary to what Veloudis (1985) claims, *na*-relatives do not impose the opaque interpretation. The content of a *na*-relative may be understood either as originating from the speaker or from the grammatical subject depending on pragmatic considerations.

EPILOGUE

In this thesis I have argued that the indicative and the subjunctive in Modern Greek encode non-truth-conditional information about a particular type of propositional attitude. A *na*-clause indicates that the proposition expressed is entertained as a description of a state of affairs in a possible world. A non *na*-clause, on the other hand, indicates that the proposition expressed is entertained as a description of a state of affairs in the base world. This information is procedural rather than conceptual. As I argued in detail with respect to the subjunctive, the information it encodes does not contribute directly to the higher level explicatures of the utterance; rather, it instructs the hearer to construct a certain type of higher level explicature rather than another.

This thesis provides additional evidence for two basic relevance-theoretic claims: the need to distinguish between conceptual and procedural meaning and the claim that mood indicators are best analysed as encoding procedural meaning. In addition, by discussing declarative and interrogative *na*-clauses, I have shown how the procedural meaning encoded by the subjunctive may interact with the procedural meaning of declaratives and interrogatives.

Furthermore, I have argued that the various interpretations of independent *na*-clauses are a function of their linguistically encoded content and pragmatic considerations, i.e. considerations of relevance. I have discussed *na*-clauses with imperative-, optative- and hortative-like interpretations, *na*-clauses expressing possibility, potentiality and strong emotions, like surprise and indignation, narrative *na*-clauses, *na*-clauses which represent thoughts rather than states of affairs and interrogative *na*-clauses, and showed that all these interpretations may receive a psychologically plausible explanation within relevance theory. Moreover, I have argued that the semantics of *na* provides us with an adequate basis for accounting for the differences in meaning between independent *na*- and non *na*-clauses, and for explaining the differences and similarities between the subjunctive and the imperative. Finally, I discussed the interpretation of relative clauses in the subjunctive and indicative. Subjunctive relative clauses impose certain restrictions on the way the indefinite descriptions they modify are interpreted; indicative relatives, on the other hand, do not impose any such restrictions on the definite and indefinite descriptions they accompany. I have shown that these restrictions

follow from the semantics of *na*-clauses and do not offer any evidence for the claim that definite and indefinite descriptions are semantically ambiguous. On the contrary, I have argued that definite and indefinite descriptions are not ambiguous; their various interpretations can be explained on the basis of pragmatic considerations.

This work raises a number of questions, which I cannot but leave to future research. However, let me finish by pointing out a few.

The first question is whether the analysis presented here can be extended to account for the subjunctive in other languages. Most of the interpretations of independent clauses in the subjunctive discussed here arise in other languages as well. For example, in German and French the subjunctive may be used instead of the imperative (although perhaps not as freely as in MG), as in (1); in English and in French the subjunctive may be used to express a wish as in (2); moreover, in French subjunctive main clauses may express supposition or surprised exclamation, as in (3):

- (1) a. Nehme sich jeder noch schnell ein Brot
(Donhauser 1988: 67)
b. Qu'il soit pendu
- (2) a. God save the Queen
b. Que le roi vive
- (3) a. Que l'ennemi vienne, le lâche s'enfuit
b. Moi, que je trahisse mon pays!

However, the subjunctive does not seem to be used in the same way in all languages. For example, in German and Icelandic, but not in Modern Greek, it typically occurs in indirect speech:

- (4) a. Er sagte, sie hatten das getan
(Donhauser 1988: 69)

b. Jon segir alltaf að jörðin sé flöt

John always says that the earth is (SUBJ) flat

(adapted from Sigurdhsson 1990: 328)

c. (Formaðhurinn varð óskaplega reiðhur.) Tilígan vaeri svivirðhileg og...

The chairman was furiously angry. The proposal was (SUBJ) outrageous and..

(adapted from Sigurdhsson 1990:316)

According to Sigurdhsson (1990:327), the speaker is signalling with the subjunctive that the proposition expressed is the responsibility of someone else, i.e. the speaker does not take a stand on its truthfulness. It is not difficult to account for such examples within the relevance-theoretic analysis I have developed. Using the subjunctive, the speaker indicates that the proposition expressed is entertained as a description of a state of affairs in a merely possible world, thereby suggesting that she does not want to commit herself to the claim that the proposition expressed is true in the actual world. In (4c) the hearer has to infer further that "the proposal was outrageous" is attributed to "the chairman"; in (4a) and (4b) this information is absorbed in the semantics of the main verb "say" and the hearer will access it by decoding. For example, processing (4b) from left to right the hearer knows by the time he starts processing the clause "the earth is flat" that it is attributed to someone other than the speaker, namely John. On the other hand, some explanation should be given for why *na*-clauses in MG are not typically used in this way.

An issue that this dissertation leaves open is the semantic differences, if any, between the subjunctive and the infinitive. As I said, in Modern Greek there is no infinitival form. Now, the most natural way of translating some independent *na*-clauses (and almost all complement *na*-clauses) into English is by using the infinitive. For example,

(5) a. Na pernai oli tou tin ora brosta stin tileorasi

na spend-3s-IPF all his the time in front the television

To spend all his time in front of the TV

b. O Petros na se ksehasi, kiria Anna?
the Peter na you forget-3s-PF, Mrs Anna
Peter forget you, Mrs Anna?

c. Jati na klei?
why na-cry-3s-IPF
Why cry?

This may suggest that there are certain similarities in meaning between the infinitive and the subjunctive¹. Moreover, although the infinitive cannot be used in English to issue a command (i.e. instead of an imperative), this is possible in certain situations in other languages, like for example, German:

- (6) a. Wegtreten! Rühren
b. Nicht rauchen

However, the infinitive and the subjunctive are most likely to turn out not to be synonymous: they are formally distinct and they don't share all their interpretations. For example, as far as I know, infinitival clauses may not be used to express wishes, or to make suppositions, or to signal indirect speech. A complete account of the semantic differences between subjunctives and infinitives should be backed by an account of their syntactic differences.

With respect to the subjunctive in Modern Greek, there is at least one important issue that has not been discussed in this thesis. According to Veloudis and Philippaki-Warbuton (1983), there are two subjunctive particles in Modern Greek: *na* and *as*. There are certain similarities and certain differences in the distribution of the two particles. In contrast to *na*, *as* may occur in independent clauses only. On the other hand, like *na*, *as* is incompatible with the future particle *tha* (**as tha vreksi* '**let will rain'). Like *na*-clauses, *as*-clauses are marked for perfective or imperfective aspect in the non-past forms. With respect to their interpretations, there are significant differences between *na*- and *as*-clauses. *As*-

¹It is, in fact, suggested by Huntley (1984) that infinitives, like all non-indicatives on his analysis, represent the described state of affairs as possible.

clauses are typically interpreted as making suggestions, granting permission and expressing wishes (both realisable and unrealisable). For example,

- (7) a. As fame tora
as eat-1pl-PF now
Let us eat now
- b. As diavaze
As studied-3s-IPF
Would that he had studied
- c. As stamatisete tora
as stop-2pl-PF now
You may stop now
- d. As vreksi, thee mou
as rain-3s-PF, god my
Let it rain, my God

Na-clauses and *as*-clauses do not seem to be synonymous: the interpretations that *as*-clauses may have are a subset of the interpretations that *na*-clauses may have. For example, *as*-clauses cannot be used to express mere possibility or potentiality; also, *as*-clauses may not be interrogative. My impression is that the *as*+verb construction is only a subjunctive-like construction, perhaps closer in meaning to the *let* and *let's* constructions in English.²

Moreover, *as*-clauses may serve as antecedents to certain kinds of conditionals, as discussed in detail in Nikiforidou (1990). For example,

- (8) as teliosi tin doulia tou ke tha pame sinema
as finish-3s-PF the work his and will go-1pl movies
Let him finish his work and we will go to the movies

²For a relevance-theoretic analysis of the *let* and *let's* constructions in English see Clark (1993b).

Recall that *na*-clauses may also serve as antecedents of conditionals. For example,

- (9) *na teliosi tin doulia tou (ke) tha pame sinema*
 na finish-3s the work his will go-1pl movies
 Should he finish his work we will go to the movies

There are many interesting issues here: How can we account for the differences in meaning between *as*-conditionals, *na*-conditionals and conditionals where the antecedent is in the indicative? Are sentences like (8) and (9) real "conditionals"? By what criteria? And, finally, how does the account of such constructions fit in with the procedural account of such modal devices as the subjunctive, the indicative and the *as*-construction? A preliminary account of the semantics of *as*-clauses and the several types of conditionals mentioned here is proposed in Rouchota (in preparation).

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